Lectures
ON THE
PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

Delivered at the Royal College of Physicians of London, July, 1876.

BY C. E. BROWN-SÉQUARD,
PROFESSOR OF MEDICINE AT THE COLLEGE OF FRANCE.

LECTURE III.—PART VI.[1]

ON PARALYSIS OF LIMBS AS AN EFFECT OF DISEASE OF THE MEDULLA OBLONGATA AND NEIGHBOURING PARTS.

Every part of the medulla oblongata is able to produce a direct paralysis—Cases of pressure on the antero-lateral parts of the pons Varolii, on the crus cerebri, on the cerebellum, and on the medulla oblongata, with direct paralysis—Cases of disease of the cerebellum producing also direct paralysis—Cases of destruction, or considerable alteration, of the whole or of part of a lateral half of the pons Varolii with direct paralysis—Conclusions against the views admitted as regards decussation of voluntary motor conductors and as regards the mechanism of production of paralysis.

THE fifteen cases I have mentioned of paralysis existing on the side of a lesion in the medulla oblongata acquire a still more decisive importance against the admitted theories relating to the physiology of voluntary movement, and to the mode of production of paralysis, when we put them face to face (as I intend doing soon) with facts showing that all the parts which in those cases have caused direct paralysis, can also cause cross paralysis, or can be destroyed or deeply altered without any evident paralysis of limbs on either side. Even if it were not quite contrary to the generally accepted views of physicians that a paralysis of limbs should appear on the side of a lesion in the medulla oblongata, these cases would still be in opposition to admitted views in showing that any part of that nervous centre can produce a loss of movement in limbs. In four of those cases (Nos. 1, 2, 3, 4, THE LANCET, Jan. 4th, 1879, p. 1) the lesion was in the posterior parts of the oblong medulla; in three cases (Nos. 5, 7, 8) it was in the olivary or lateral columns; in one case (No. 6) it was in the interior of one half; in two cases (Nos. 12, 15) it was in the anterior pyramid; in two cases it was not only partly in one anterior pyramid, but must have also altered at least fibres of the other pyramid (Nos. 9, 10); in the three others there was a lack of circulation from embolism or thrombosis of one vertebral artery in the greatest part of one lateral half of that nervous centre (Nos. 11, 13, 14).[2] It is important to remark that in at least the seven last cases the anterior pyramid was more or less altered.

These cases lead forcibly to the following dilemma: either the voluntary motor conductors decussate above the medulla oblongata, or we must consider that paralysis in those cases was due to another cause than that which is admitted to exist in organic affections of the brain—i.e., the destruction or an alteration of motor elements. Most physiologists now admit that the voluntary motor conductors decussate chiefly along the base of the brain above the medulla oblongata. The facts I have related might appear to prove the correctness of their view. But, as I will now show, there are abundant proofs that this theory is just as wrong as that which supposes that the voluntary motor conductors decussate wholly or chiefly at the lower extremity of the medulla oblongata. For that purpose I will first proceed to give cases of direct paralysis from lesions involving one or another of the antero-lateral parts of the base of the brain on one side. Wishing to be as short as possible, I will first name the author to whom we owe the case I quote, and then give the most essential features of the case:—1. Mr. G. P. Field:[3] Paralysis of the *right* limbs and of the *right* side of the face; a tumour of the size of a Maltese orange was found attached to the posterior surface of the *right* petrous bone, just above the internal meatus; the upper margin of the medulla formed its posterior boundary. (This man had been under the care of a most excellent observer, Dr. W. H. Broadbent, at St. Mary's). 2. Dr. J. Hughlings-Jackson:[4] Slight *left* hemiplegia; tumour the size of a nut at insertion of the pair, *left* side, against the pons Varolii and the medulla oblongata. 3. Dr. John W. Ogle:[5] Incomplete paralysis of the *left* limbs; aneurism of the *left* cerebellar artery compressing the crus cerebelli and the pons Varolii. 4. Drs. J. F. Gould and Calvin Ellis:[6] Paralysis of the left limbs, and later on, but slightly, of the right ones also; beneath the *left* lobe of the cerebellum and the medulla oblongata, flattening those parts, there was a tumour an inch and a half in diameter. 5. Mr. J. W. H. Parkinson:[7] Muscular power of *right* limbs much impaired, and there was a tumour the size of a pullet's egg arising from posterior and inner surface of the petrous bone, and pressing on the pons Varolii, the medulla oblongata, and the cerebellum on the *right* side. 6. Abercrombie:[8] Slight paralysis of the *right* arm and leg; below the *right* lobe of the cerebellum, which was reduced to nearly a purulent consistence, there was a tumour the size of a hen's egg attached to the dura mater behind the petrous bone; there was also a tumour in the lower part of the *right* posterior lobe of the cerebrum. 7. Mr. Beveridge:[9] Paralysis and atrophy of the *left* limbs; there was a tumour an inch long on the petrous bone, pressing on the *left* side of the pons Varolii; the *left* crus cerebri also was softened. 8. Dr. Abbott:[10] Incomplete paralysis of the *right* limbs; later on, both legs were very weak; there was a large tumour attached to the petrous bone pressing on the *right* side of the cerebellum, the pons Varolii, and the medulla oblongata; the *right* half of the pons was reduced to two-fifths its size. 9. Horner:[11] Slight *left* hemiplegia; there was a tumour on the *left* side of the pons Varolii and the *left* crus cerebelli. 10. Cruveilhier:[12] Slight paralysis on *left* side; there was a tumour on the posterior surface of the *left* petrous bone, reaching the foramen magnum. 11. Dr. Enos:[13] Paralysis with alteration of the muscular sense in the hand first, then in the leg, on the *right* side; there was a cheesy matter pressing against the *right* crus cerebelli and pons, and cysts in the *right* lobe of the cerebellum. 12. Boyer:[14] Paresis of the right arm; there was a tumour of the size of a large walnut under the crus cerebri, the pons Varolii, the cerebellum, and the medulla oblongata on the *right* side. 13. Boettcher:[15] Slight paralysis on the *left* side; there was a tumour pressing on the *left* side of the pons Varolii, the medulla oblongata, and the crus cerebelli. 14. Professor Rosenthal, of Vienna:[16] *Left* hemiplegia;

[1] For Part V. of this lecture see THE LANCET, Jan. 4th, 1879.

[2] To these cases I will add two others, of which one is due to a most able observer, Dr. S. O. Habershon (Guy's Hospital Reports, third series, vol. xxiv., 1879, pp. 135-141). Paralysis in this case appeared in the *right* limbs, but had nearly disappeared after five weeks; its cause was a glioma occupying chiefly the olivary and posterior columns of the medulla oblongata on the *right* side, morbid elements being found also in all parts, including the anterior pyramid of that side. The other case was published by Sarrau (Bulletins de la Société Anatomique [Paris, 1838], vol. xiii., p. 306). The *left* limbs were paralysed (except towards the end, when the right ones lost power also); the medulla oblongata, and particularly its *left* anterior pyramid, was pressed upon; there were besides various lesions in the *left* side of the brain.

[3] THE LANCET, vol. ii. 1877, p. 840.

[4] The Royal London Ophthalmic Hospital Reports, vol. iv., part 4, 1865, p. 422. My able friend Dr. J. Hughlings-Jackson has seen another case of that kind. He says, in a foot-note, in the Royal London Ophthalmic Hospital Reports, vol. vi., part 1, p. 57:—"I have seen a case .... in which the existence of slight weakness of the *left* side led me incorrectly to diagnose disease of the opposite hemisphere. At the autopsy we found no disease of the hemispheres. There was a tumour at the base, which grew so as to press on the *left* crus cerebelli, thus producing, as we know from Dr. Brown-Séquard's researches disease here sometimes does, paralysis on the same side as the lesion."

[5] Transactions of the Medico-Chirurgical Society (London, 1869), vol. xlii., p. 415.

[6] The Boston Medical and Surgical Journal (Boston, 1862,) vol. lxv., p. 412.

[7] The London Medical Gazette, 1831, vol. viii., p. 365.

[8] Pathological and Practical Researches on Diseases of the Brain. Fourth edition (Edinburgh, 1845), p. 172.

[9] The Medical Times and Gazette (London, 1869), vol. i., p. 519.

[10] Boston Medical and Surgical Journal, 1868, vol. lxxix., p. 410.

[11] The American Journal of Medical Science, vol. i., 1829, p. 58.

[12] Bulletins de la Société Anatomique (Paris, 1855), vol. xxx., p. 475.

[13] New York Journal of Medicine (June, 1878), p. 648.

[14] Bulletins de la Société Anatomique (Paris, 1834), vol. ix., p. 273.

[15] Archives of Ophthalmology and Otology (New York, 1873), vol. iii., p. 134.

[16] Traité Clinique des Maladies du Système Nerveux; Traduction Française (Paris, 1873), p. 215.

there was a tumour, the size of a walnut, in the *left* crus cerebelli, and softening of the neighbouring tissue.[17] 15. Parent-Duchâtelet and Martinet:[18] *Left* hemiplegia of variable intensity; there were alterations of the surface of the *left* side of the pons Varolii and cerebellum, and a diminution of the foramen magnum on the *left* side, where a tumour pressed on the medulla oblongata. 16. Rostan:[19] Paralysis of the *right* arm; large exostosis springing from the petrous bone pressed on the pons Varolii and the cerebellum, on the *right* side. 17. J. M. Snook:[20] Gradual paralysis of the *right* limbs; there was a tumour two inches long, one inch and a half thick, under the *right* side of the pons Varolii, the cerebellum, and the medulla oblongata. 18. Lénac:[21] Almost complete hemiplegia on the *left* side, with great weakness of the right leg; there was a very large tumour extending from the foramen magnum to the sphenoid, on the *left* side, pressing considerably on the crus cerebri, the pons Varolii, the medulla oblongata, and the crus cerebelli, on that same side (the *left*). 19. Soulier:[22] Paralysis of the *right* limbs; there was a tumour in the anterior part of the pons Varolii, the cerebellum, and the crus cerebelli, on the *right* side. 20. Jobert de Lamballe:[23] Paralysis, considerable, but not complete, of the *left* limbs; there was a tumour, larger than a hen's egg, between the cranium and the crus cerebri, the pons Varolii, the crus cerebelli, and the medulla oblongata, on the *left* side. 21. Lebert:[24] *Right* hemiplegia; there was a tumour on the internal extremity of the petrous bone pressing on the pons Varolii and the brain on the *right* side. 22. Cossy:[25] Paralysis of the *right* limbs; there was a tumour pressing on the *right* side of the pons Varolii (which was considerably flattened), and on the *right* lobe of the cerebellum; the *right* anterior pyramid was atrophied. 23. Drs. Wellington and Calvin Ellis:[26] Paralysis of the *right* limbs, with marked alteration of the muscular sense; there was a cyst in the *right* lobe of the cerebellum which compressed the pons Varolii and the medulla oblongata, and caused atrophy of those parts on that side. 24. Crousey:[27] *Right* hemiplegia; there was a tumour in the *right* half of the cerebellum, altering the medulla oblongata. 25. Cruveilhier:[28] *Right* hemiplegia; there was a cancer attached to the *right* petrous bone, pressing on neighbouring parts, with atrophy of the *right* half of the cerebellum, and several other lesions, old or recent, on the same side of the brain. 26. Professor Gubler:[29] Slight paralysis of the *left* lower limb; there was a large tumour, pressing on the pons Varolii and the medulla oblongata, on the *left* side.[30] 27. Dr. R. T. Edes:[31] Paralysis of the *left* limbs; there was a tumour springing from the *left* petrous bone, and behind it several small cysts pressing on the cerebellum.[32]

To the facts I have briefly mentioned I could easily add a large number in which a tumour or an abscess in one half of the cerebellum, pressing on the corresponding half of the pons Varolii, has produced a direct paralysis. In 1849 I saw one of these cases of disease of the cerebellum, causing hemiplegia on the same side.[33] Professor Vulpian, Drozda, Michel, Cruveilhier, Mazier, Sieffert, Dr. Fuller (THE LANCET, vol. ii. 1861, p. 422), Colin, Guillet, Leven, Hillairet, Tavernier, Hayem, Toynbee, Legendre, Dr. J. W. Ogle (Trans. Path. Soc., London, vol. xii., p. 8), and many other excellent observers, have published such facts. These cases, together with the twenty-seven cases, a brief outline of which I have given, show that a pressure either on the back, the side, or the front of the pons Varolii can produce a direct paralysis.

Not only can a pressure exerted from outside on any part of the pons produce a direct paralysis, but a destruction of tissue of that organ, either owing to that external cause, as in many of the cases I have given, or due to an internal affection, as in the following cases, can produce also such a paralysis. The late Mr. E. Stanley[34] published the first and one of the best cases of that kind. A tumour, having destroyed the whole *left* half of the pons Varolii, had produced a complete paralysis of the face and limbs *on that side*. Mr. J. Toynbee[35] gives a case in which the principal seat of the disease was the *right* side of the pons Varolii, the patient having been hemiplegic on the right side. Dr. G. May[36] relates a case of abscess of the *right* side of the pons Varolii, with ulceration of its entire surface. There had been for three months before death paralysis of the *right* limbs. Martineau[37] gives the history of a man who was attacked with complete *left* hemiplegia, and at whose autopsy the *left* half of the pons Varolii was found softened in its anterior part. Dr. J. Browne[38] communicated to a Glasgow Medical Society, in May, 1875, a case of hæmorrhage in the anterior part of the upper extremity of the pons Varolii, in the *left* half, but extending a little into the right side, having produced a gradual paralysis of the whole *left* side of the body. Darolles[39] gives a case of complete *right* hemiplegia, due to softening of the upper part of the pons Varolii, close by the *right* crus cerebri and the *right* crus cerebelli.

Adding these last cases to the preceding ones I have mentioned, we are in presence of more than enough facts to prove that every part of the pons Varolii, like every part of the medulla oblongata, as I have previously shown, can produce a direct paralysis. This is certainly a powerful argument against the views that the voluntary motor conductors decussate either entirely in the pons Varolii or in the medulla oblongata, or partly in one partly in the other of these nervous centres. But the arguments I will now give are each of them at least as decisive as the preceding. I will proceed to show, first, that any part of the medulla oblongata or of the pons Varolii can produce a cross paralysis of one or two limbs, and that one side of these nervous centres can produce a paralysis of the two arms or of the two legs; secondly, that any part of the medulla oblongata or of the pons Varolii can be destroyed or considerably altered without the production of a paralysis of either one or more limbs. It will be thereby rendered evident that paralysis does not arise from the destruction of motor elements, and that we must explain it differently.

---

[17] In another case of Professor Rosenthal's (loc. cit., p. 208) there was a tumour pressing on the pons Varolii and paralysis on the corresponding side (the left); but I fear that by some mistake the word *left* has been written in place of the word *right*.

[18] Recherches sur l'Inflammation de l'Arachnoïde (Paris, 1821), p. 471.

[19] Recherches sur le Ramollissement du Cerveau (Paris, 1833), second edition, p. 143.

[20] Transactions of the State Medical Society of Michigan (Lansing, 1874), vol. vi., p. 228.

[21] Bulletins de la Société Anatomique (Paris, 1856), vol. xxxi., p. 211.

[22] Lyon Médical, Octobre, 1872, p. 251, quoted in Revue des Sciences Médicales de G. Hayem (Paris, 1873), vol. i., p. 153.

[23] Etudes sur le Système Nerveux (Paris, 1838), p. 446.

[24] Physiologie Pathologique, vol. ii., p. 148, quoted in his work on Maladies Cancéreuses, p. 508.

[25] Bulletins de la Société Anatomique (Paris, 1874), p. 83.

[26] Boston Medical and Surgical Journal (Boston, 1863), vol. lxvii., p. 251.

[27] Bulletins de la Société Anatomique (Paris, 1869), p. 65.

[28] Anatomie Pathologique, livraison xxxvii., p. 1.

[29] Gazette Hebdomadaire de Médecine et de Chirurgie (Paris, 1862), p. 39.

[30] A paralysis limited to one of the lower limbs in cases of disease in any part of the brain being rare, it is to be regretted that more details were not given by Mr. Henry Taylor in a case (THE LANCET, 1845, vol. ii., p. 205) in which the *left* leg wasted away, and the autopsy showed a tumour under the cerebellum and the pons Varolii on the *same side*. There was great impairment of strength everywhere, but the atrophied muscles must have been paralysed.

[31] Boston Medical and Surgical Journal (1873), vol. lxxxviii., p. 97.

[32] Dr. Edes had brought the patient to me nearly four years before that autopsy was made. I diagnosed a direct paralysis due to disease of the pons Varolii, or a tumour pressing upon it. Such a diagnosis, impossible to those who do not know that an organic disease located upon or near the place of origin of the trigeminal nerve not rarely causes a direct paralysis, I did not find very difficult in that case. In some papers of mine I had already given the rules relating to that diagnosis.

[33] That case was published by Taillé in Comptes Rendus de la Société de Biologie (Paris, 1849), vol. i., p. 148.

[34] London Medical Gazette, vol. i. 1828, p. 531.

[35] The Diseases of the Ear (London, 1868), p. 378.

[36] The Association Medical Journal, vol. i., 1853, p. 994.

[37] Bulletins de la Société Anatomique: Paris, 1880, p. 445; Paris, Mars, 1879, p. 236.

[38] The Journal of Mental Science, quoted in Annales Médico-Psychologiques.

[39] Bulletins de la Société Anatomique (Paris, 1875), p. 346.

TYPHOID EPIDEMIC IN WARWICKSHIRE.—At a meeting of the Alcester Sanitary Authority on Tuesday a report was presented showing that eighteen cases of typhoid fever and three deaths had occurred since the month of July. The epidemic was attributed to the pollution of the well water, and a letter from the Local Government Board urged that the wells should be immediately closed, and the Waterworks Company's water be used instead of the well water. Steps were ordered by the local authority to be taken for closing the wells. Five fresh cases of typhoid had been reported within the past fortnight. It was also stated that there was an outbreak of scarlet fever at the village of Feckenham, where six houses were affected, and three deaths had happened.

ABSTRACT
OF A
Clinical Lecture
ON
CANCER OF THE BREAST.

Delivered at the Middlesex Hospital, January 8th, 1878,

BY T. W. NUNN, F.R.C.S.,
SURGEON TO THE HOSPITAL.

(*Reported by* HORNSEY CASSON, Esq.)

GENTLEMEN,—Among the many cases of cancer of the breast you have had the opportunity of observing in the wards of this hospital for the last few years, you will have noticed that some are very rapid in their progress, with symptoms which may be described as *acute*, from their severity and the rapidity with which the morbid changes in the growth succeed one another, as well as from their speedily fatal termination. Others are marked by the exhibition of totally opposite phenomena. A history will be given by the patient on admission obscure from the very length of time which may have elapsed since first the little lump, which gave no pain, was accidentally discovered. The changes in the affected parts go on the very reverse of rapidly, and the patient lives on year after year, the disease making comparatively little progress. I propose to bring before your notice to-day two typical cases, one of which is the *acute*, the other of the *chronic*, variety of cancer of the breast.

CASE 1. — A woman aged forty-two, admitted Feb. 1st, 1877. The symptoms in this case were at first very obscure. The right breast was somewhat swollen, but not at all tender. There was no retraction of nipple. She stated that about a month previous to admission she had received a blow, not a very severe one, on the affected breast. She had paid no particular attention to it at first, but after about a week had elapsed the breast began to be painful. The pain increased till she came into hospital. After she had been a short time under observation the swelling increased, now accompanied by considerable tenderness; the whole surface was of a bright brick-red colour, and presented the appearance of a breast in a state of acute inflammation, as in the earlier stage of the formation of "milk-abscess." I hesitated in arriving at a diagnosis of the case. What could it be? It seemed improbable that such a blow as was described should have given rise to such an amount of inflammatory action. The patient was put under chloroform, and I passed through the swollen and inflamed structure the long narrow blade of an exploring knife. Only a few drops of blood escaped, but no pus. Clearly there was no abscess. The wound was closed with collodion, and no harm resulted from the exploration. After a little time the pain considerably increased, and now the surface, especially towards the sternal border, assumed a mottled appearance, from the presence of a number of minute patches infiltrated with morbid material. The glands in the axilla of the affected side now became enlarged, and also *those of the opposite side*. The patient died in something less than six months after admission. I should define as the cause of death "acute scirrhus of the breast." At the post-mortem examination, we found one lung (I think the right) adherent firmly to the pleura, the result no doubt of old pleurisy. The other side of the thorax contained no less than sixteen ounces of yellowish serum, the product of recent pleurisy, from the exhaustion consequent on which no doubt she died, and there was equally no doubt that this pleurisy was caused by a number of secondary cancerous deposits which we found studding the pleura of this side. Dr. Lyell made a microscopic examination of the breast, and of the secondary deposits, which left no doubt that the case was one of true cancer, or carcinoma, to use the generic term; and of the species "scirrhus." Now this termination of the case under consideration is by no means uncommon. You will often find your patient become unable to breathe except in a more or less upright position, and afterwards, even in that posture, respiration is with difficulty effected at all. This symptom almost invariably points to the fact that a cancerous deposit has been formed in the pleura, and a speedy termination of the case from pleurisy is to be anticipated. There are two other points in connexion with this woman to which I will draw your attention. One is that you must not invariably expect to find what is so commonly described as a never-failing concomitant of this disease—the "cancerous cachexia" as it is called—that peculiar sallow complexion and wasting of tissues which are certainly so often present in these cases. This patient presented nothing of this appearance. She was hale-looking and ruddy of complexion, there was not the slightest apparent wasting of form, and to outward appearance she was "the picture of good health," and this is no uncommon description of patients similarly affected. So you must not let the absence of this "cancerous cachexia" mislead in forming a diagnosis in a doubtful case. The other circumstance I omitted to mention was that about the same time as the appearance of the little tubercles giving rise to the mottled appearance of the surface of the tumour to which I alluded, the arm on the affected side began to swell, and grew stiff and painful, and all about the shoulder was the seat of the condition which is best described by the term "solid œdema." In perhaps one case in ten of cancer of the breast, you have this solid œdema of the neighbouring arm; it is a condition which gives rise to a very great amount of trouble and annoyance to the unfortunate patient, especially as interfering with respiration.

If you were to ask in what the next case differed from the one I have just narrated, I should say in everything except the actual nature of the disease.

CASE 2.—An old wizen-looking woman, then seventy-four, was admitted at Christmas, 1873, with a round hard mass occupying the upper part of the right breast. Here you had the cancerous aspect in perfection: the body emaciated and shrunken, the skin brown and studded with numerous sessile warts such as are described by Paget in his description of chimney-sweeper's cancer. One axillary gland was thought to be somewhat enlarged, but it was very little, if at all. It was a case in which removal of the tumour by operation seemed feasible, but such a proceeding did not meet with the concurrence of the patient, who objected on the ground of her advanced age. The operation was not urged upon her, and no active treatment has been adopted up to the present time. After she had been in hospital twelve months or so, either from some action of the diseased part itself or from some adventitious circumstance—cold, perhaps, as likely as anything,—considerable inflammatory action commenced in the tumour, and then this one gland, and this one only, considerably enlarged, and has remained so ever since. On one or two occasions parts of the tumour have assumed a gangrenous condition and sloughed away, after which the resulting cavity and even the edges of the growth itself have more or less healed. It is no uncommon thing for a cancerous part to die and so thoroughly and completely slough away as to leave the surrounding parts for the time healthily healed over, pretty much the same as if the removal had been effected by operation. In this case, however, a much more uncommon state of things might be observed. The tumour itself, or at least parts of it, healed. The healing, however, was very partial and superficial. The woman is still in the hospital, and you will probably have the opportunity of observing the case for as many more years as she has already been under our notice.

Now, could any two cases be more widely different in their clinical bearings than these two, and yet they are both equally cases of cancer. Cancer consists, as you know, in the deposition in some normal tissue of a number of multinucleated cells, without any special intercellular material. Some of these cells are described as being caudate. I must confess that I have not met with any very convincing samples of this variety, and I have grave doubts whether these appendages are not accidentally manufactured by manipulation for the purposes of microscopical examination. These cells, whether caudate or not is not of much importance, are imbedded in a stroma of fibrous character. Their chief characteristic seems to be that of an exceedingly low vitality. No sooner are they deposited than they begin, as a rule, to assume a fatty condition, which speedily goes on to rapid degeneration, and this degeneration spreads into the surrounding tissues, and results in the death and subsequent sloughing away of the part. One great characteristic of these cancerous tumours is the very rapid and great increase of growth by the formation of new tissue; this is caused by the irritation of the capillaries by the deposit in their neighbourhood of the cancerous material,

and increased vascularity—that is to say, increased activity of the bloodvessels—leads naturally to increased formation of new tissue; and those enormous outgrowths from cancerous tumours, which we are in the habit of describing as "fungoid," are the simple results of this increase of vascularity. Now, I want you to take notice that there exists another set of vessels, entirely distinct from the capillaries in their nature and uses, the consideration of which in their relation to cancer has hitherto, as far as I know, been entirely overlooked. I allude to the lymphatics. By this term I do not mean the lymphatic glands—their connexion with cancer has long enough been established; but those minute canaliculi, which recent research has shown to exist in those nooks and corners of space which we have considered to be filled with mere "connective tissue" for want of a better name. The question of whether cancer is a local or constitutional disease has been exhaustively discussed some years ago, and I have not time nor the inclination to go into that matter here. You must simply take my opinion for what you may consider it worth when I tell you that although in many cases of cancer certain phenomena may be clearly ascribable to local causes, in others, as in the first of our two cases, no such explanation is possible; and I am disposed to adopt a new nomenclature for cases of a kindred type, which will sufficiently foreshadow my theories as to their nature: I shall call them cases of *lymphatic cancer*. I believe that in these cases the primary disease exists in these minute lymphatic vessels, and, as in our case, the adventitious local cause, the blow on the breast, simply affords a *locale* where the constitutional tendency or diathesis may develop itself. You will remember that the glands of the unaffected side were equally involved with those of the affected, and that very soon after the first development of the symptoms of the primary seat of the disease the pleuræ became affected with the secondary deposit. Operation does no good in these cases; for this reason—that the disease is general, and does not merely exist in a local form capable of removal. Many cases have lately occurred within my own knowledge where operative interference has incurred the blame of considerably expediting the death of the patient, and this tends to bring discredit on the operation to the prejudice of cases where it would be likely to prove of substantial benefit. I intend to treat more at length on a future occasion, and in another place, of this special form of the disease, which I have introduced to your notice to-day under the name of "lymphatic cancer."

ON THE APPLICATION OF ELECTRICITY DIRECTLY TO THE NERVES AND MUSCLES BY MEANS OF ACUPUNCTURE.

BY JOHN E. MORGAN, M.A. M.D. (OXON.), F.R.C.P.,
PROFESSOR OF MEDICINE AT OWENS COLLEGE, MANCHESTER, AND PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

ALL who have had much experience in electro-therapeutics must feel that there are many cases, both of motor and of sensory paralysis, where the application of electricity to the epidermis, by means of the various electrodes at present in use, neither affords that exact diagnostic information, nor is attended by such favourable curative results, as we are justified in anticipating from our knowledge of its varied physiological effects.

The different organs and tissues of which the body is built up permit the continuous and induced currents to traverse their structures with considerable facility. Some, it is true, are very much better conductors than others. Indeed, the conductivity of the animal tissues seems to bear a very close relation to the amount of moisture they contain; muscles conducting far more readily than bones, and more readily likewise than cartilages, tendons, or nerves; while the resistance offered by the epidermis to the electric current is very great—so great, indeed, that in numerous instances I believe it materially interferes with the success of our treatment.

In discussing this question it is important to remember that the epidermis itself may almost be looked upon as an insulator. It is probable that the electric current makes its way to the parts which underlie it, chiefly, at any rate, by the sudoriferous ducts. In many cases, however, these paths are more or less closed. Often where this method might be expected to prove most beneficial the skin itself is found to have undergone important changes. In limbs long wasted the perspiration sometimes ceases to be poured out, and the sweat-ducts become gradually occluded; while in other cases the skin itself is in an hypertrophied condition, and thus opposes to the continuous and induced current a greater resistance than when it is healthy. It is said, indeed, that if the epidermis be thoroughly moistened with hot salt and water, it is itself converted into a good conductor. No doubt in this manner its conductivity may be greatly increased. Still, as I shall endeavour to show, its resistance to the different electrical currents is immense. In using electricity at the bedside I have long satisfied myself that there are certain cases where this resistance is so considerable that while the epidermis remains intact it is impossible to act upon the underlying structures. When, however, this obstacle to the electric current is overcome, marked results are immediately obtained. The question, then, which for some years has presented itself to my mind is this, how can we with most effect act directly upon the nerves and muscles? How can we bring electricity to bear on the deeper tissues without its encountering the resistance offered to the current by the epidermis? I first attempted to do this by the application of blisters to those parts of the body which I desired to galvanise. After the removal of the cuticle, the sponges were brought in contact with the denuded surface. But although these experiments convinced me that both galvanism and faradaism act very much more energetically when applied directly to the muscles than when the epidermis intervenes, still the irritation set up by the blisters was so great, and the exhausting effects of this mode of treatment so marked, that I was reluctantly compelled to give up the procedure. I next tried to obtain the same results by inserting needles under the epidermis, and for some time confined myself to thrusting them subcutaneously into the connective tissue beneath the skin, much in the same manner as we are accustomed to do in injecting morphia by means of a syringe. Along these needles the electric currents gained access to the parts beneath the skin. In this manner I found that muscular contractions were far more readily induced than when electricity was applied to the outer side of the epidermis. Still the effects thus produced on the muscles and nerves were not so satisfactory or energetic as when the needles were thrust direct into the more fleshy portions of the muscles, and it is to this application of electricity that I desire more especially to direct attention on the present occasion.

It is now about twelve months since I first had recourse to this mode of treatment. I was not then aware that electric acupuncture had ever been practised as a curative measure. In this opinion, however, I find that I am mistaken. It appears that Sarlandière thrust insulated needles through the skin into the muscles in the year 1825—fifty-four years ago. He did not, however, use galvanism, but frictional electricity. Six or eight years later Magendie seems to have practised electric acupuncture, but in his time the batteries in use were far less perfect and effective than those we now possess. So far as I can discover, however, no electro-therapeutist in this country has applied this remedy, either in the manner which I have found most beneficial, or in the class of cases which, in my experience, have proved peculiarly adapted for its use. To illustrate my meaning I propose detailing the symptoms observed in two cases of paralysis which have come under my care in the Manchester Infirmary—the first a case of spinal meningitis, the second of myelitis, both induced by cold.

William B——, aged twenty-five, was admitted under my care on Oct. 1st, 1877. This patient was a navvy employed in a railway tunnel. For many weeks he was compelled to work in a cold, dank atmosphere, up to his knees in wet sand. Two months before he entered the hospital he observed that his right leg would occasionally, from no apparent cause, suddenly give way, or jerk out spasmodically from his body. A week later his left leg comported itself in the same manner. Symptoms such as these, indicative of motor disturbance and reflex irritation, rapidly increased; and in the course of two or three weeks he was compelled, most reluctantly, to give up his work. Like many in-

dustrious men of his class, he continued to labour when he should have been in bed, and the pain in his back was frequently so severe that he could not refrain from screaming out when the agonising paroxysms seemed to shoot through his body. These paroxysms came on with marked intensity soon after he was admitted into the infirmary. At this time the chief symptoms were, high fever, muscular spasms, hyperæsthesia of the skin, and partial retention of the fæces and urine. There was also marked stiffness of the back and neck, and pain of a rending character in the extremities. These manifestations of irritation of the nervous system lasted for two or three weeks after his admission, and then gradually subsided, hyperæsthesia and muscular spasms being succeeded by anæsthesia and paralysis, which increased until they became complete—motor and sensory paralysis invading every portion of the lower extremities.

During the early stages of the disease various antiphlogistic remedies were tried, and as soon as the more acute symptoms had subsided, electricity was applied percutaneously to the outer surface of the skin. The results, however, were not encouraging. Faradaism was first tried, both directly and indirectly. No response was, however, obtained, no trace of muscular contractility could be evoked by this form of electricity, not even when small, well-moistened electrodes were applied to the motor points. Galvanism was next employed, but the results were equally unsatisfactory. Neither cathodal nor anodal closure or opening were attended by any well-marked contractions of the muscles. The stimulus of the will likewise could not be exerted on the conductivity of the nerves. Here, then, was a patient who, in so far as his face, chest, and arms were concerned, looked the picture of robust health, while his lower extremities were in all respects cold, motionless, and devoid of feeling, the feet and ankles perpetually bathed in a clammy perspiration, and the muscles of the thighs and legs atrophied in an extreme degree. While the patient was under treatment, in the more early stages of his disease, the usual internal remedies were systematically tried. Friction also was daily applied to the lower extremities, while passive movements of the limbs were sedulously practised. At the same time galvanism and faradaism were assiduously persevered with, rheophores moistened with warm salt-and-water being brought in contact with various portions of the outer surface of the skin. In spite of these measures, however, the patient steadily lost ground. At one time, indeed, when the negative pole of the galvanic battery was applied over the lower portion of the extensor longus digitorum of the left leg, very slight contraction might occasionally be induced on cathodal closure, but these effects were not constant, and after a time entirely disappeared. The feet and the legs also became œdematous, and the paralysis of motion and sensation extended upwards with steady strides. At the time to which I allude he had been confined to the infirmary for about seven months, from the 1st October, 1877, till the beginning of June, 1878, and galvanism, faradaism, friction, and passive movements had been persistently practised for upwards of four months. Still, in the lower extremities, motion and sensation were completely lost. In addition to atrophy of the muscles, the tendons and ligaments were unnaturally lax and yielding, for when the patient was lifted out of bed and attempts were made to set his legs under him in a vertical position, so that they might, at all events when themselves propped up, support a portion of his weight, they gave way in all directions, being sometimes shot forwards, while at other times they doubled over from side to side. The partial retention also of the evacuations and urine still continued as obstinate as ever.

Such, then, was his state in the early part of June, 1878, when I commenced to treat the case by electric acupuncture. In my earlier experiments I made use of insulated needles similar to those we are in the habit of inserting in the treatment of aneurisms by galvanism. These, however, I soon discarded, and rarely now employ. I found them more difficult to introduce through the skin than needles which are not insulated; and, at the same time, the effect on the deeper tissues seemed more caustic than stimulating and catalytical (to use a term employed by Remak). The needles I now use are as fine as they can be manufactured; they vary in length from two to four inches, and have a metallic knob the size of a small pea attached to one end. On the first occasion on which I practised acupuncture, I cautiously inserted one needle into the upper portion of the left thigh, thrusting it into the semi-membranosus muscle. I then applied the positive pole of a galvanic battery to the dorsal portion of the spine, and touched the protruding extremity of the needle with the negative pole. On turning on ten, twenty, and even thirty Leclanché cells, there was no reaction; but when the electro-motor force of the battery was increased to forty cells distinct muscular irritability was apparent, both on cathodal and on anodal closure. But, though the muscles contracted, no pain, nor indeed sensation of any kind, was experienced, even when a current generated by fifty cells was passed directly into the tissues. As this experiment was attended by no untoward results, I carefully felt my way, and, after a few trials, used the needles with very much more freedom; inserting on each occasion from five to seven or eight; three needles being usually thrust into the more fleshy portion of the muscles of the calf, and three or four more into various parts of the muscles of the thigh. The needles were introduced in different directions. Sometimes they were passed from behind forwards; sometimes the calf of the leg was nearly completely transfixed from side to side; and in other cases, again, the needles traversed the belly of the muscle obliquely, either in an upward or downward direction. The object aimed at was to act on as great a number of muscular fibres as possible, and at the same time to bring the battery to bear on different muscles at the various sittings. I have not, in this case, had recourse to the needles more than twice, or at most three times, in any one week. In using electric acupuncture, one electrode was usually applied to the surface of the skin in some indifferent part of the body, while the other was successively brought in contact with the various needles thrust into the muscles.

Very soon after this mode of treatment was adopted, marked improvement became apparent. Almost each succeeding week the muscles contracted with increasing facility to a weaker current, generated by fewer cells. At the same time, coincidently with motor improvement, sensibility likewise gradually returned. Indeed, it was with no small feelings of delight that the patient found he was beginning to experience a certain sense of pain and discomfort as the needles were driven into his flesh and the electric current passed along them. On each occasion that galvanism was employed, it was my invariable practice not to omit to touch the extremities of the needles with an electrode connected with a faradaic battery likewise. In doing so I usually employed the direct method, sometimes connecting the two poles to any two of the needles I desired to influence; while at other times one rheophore was held in contact with the outer side of the skin over the longitudinal surface of the muscle, while the other touched a needle passing through its fibres in a transverse direction. Faradaism, however, in this case gave far less satisfactory results than galvanism. Indeed, it was very apparent that the reaction of degeneration had proceeded far. For a long time it seemed wellnigh impossible to excite the muscles through their nerves by means of the induced current. Still the case was not desperate. After repeated attempts, continued for about four months, the projecting extremities of the needles were observed to move slightly as the faradaic current passed along them. This phenomenon first occurred in the muscles of the left thigh, and slowly extended to those of the calf and of the foot. I have already stated that the treatment by electric acupuncture was commenced in the early part of June, 1878; it has been continued up to the present time, and during these thirteen months the patient has steadily, though slowly, improved. Some two months after the introduction of the needles he discovered that, by a strong effort of the will, he was able to influence some of the muscles of the foot and of the leg. This response to the stimulus of the will has now extended to the whole of the muscles of the left leg and to the greater portion of those of the right. As the case progressed favourably, the ligaments and tendons round the joints grew more tense, and the atrophy of the muscles far less pronounced. I found also that when he was assisted on to his legs they were able to afford him a certain amount of support. Soon he could maintain an upright position on crutches; at first making his way about the ward on two crutches, then on one crutch and a stick, and during the last two or three months he has felt himself sufficiently firm on his legs to dispense with his crutches and rely solely on two sticks.

How much further improvement will proceed it is difficult to say. Locomotion is still performed with considerable hesitation. The patient finds a difficulty in starting upon his perigrinations round the wards. When conscious of

being watched, also, he moves about far less nimbly than when under the impression that he is unobserved. At the present time the left leg, though weak, has for all practical purposes recovered. Here acupuncture has been given up for the last four or five months. Indeed, in all cases in which the nerves and muscles respond to the induced and continuous current applied percutaneously, there, for the most part, I omit the use of the needles. But although the left leg has now wellnigh regained its functions, the right does not yet answer to the induced current so readily as could be wished. In the thigh, faradaic acupuncture can elicit from the nerves a tolerably energetic response; but the calf of the leg is still very sluggish in awaking to the stimulus. As, however, in these cases reparative changes usually proceed from the central parts towards the peripheral, it may be hoped that, with time, some yet further improvement will be apparent in his state.

I have entered somewhat fully into the symptoms and treatment of this case, because I believe it is one in which the partial recovery at present observed is largely due to the special remedial measures adopted. In the opinion of men looked upon as authorities in these diseases I should have been perfectly justified in discharging this patient four or five months after he entered the infirmary as incurable. He had been galvanised and faradised for upwards of four months, the nerves and muscles acted upon from the outer side of the skin could not be persuaded to give any response. The stimulus of the will also was powerless. The muscles, ligaments, tendons, and apparently the bones likewise, were undergoing atrophic changes, while the feet and legs were cold, clammy, and œdematous. The case, I believe, was one of spinal meningitis; but the grey matter of the cord, more especially the anterior cornu, was also affected, for the muscles were atrophied and sensibility lost. Moreover there was partial retention both of the urine and fæces. Can we suppose that in such a case nature, if dependent on her own unassisted efforts, could have brought about the improvement we now observe. It may certainly be urged that the man had youth on his side (he was twenty-five years of age), and that he had, when attacked by illness, an unimpaired constitution. Still, though age and natural vigour are very important factors in calculating the chances of recovery, I scarcely think that they would, without extraneous aid, have availed my patient in successfully battling with his malady. For at the time electric acupuncture was commenced he was steadily retrograding, while the beneficial effects of the treatment were immediately apparent. These effects also were not merely momentary and transient, but lasted a considerable time. Indeed, he constantly asserted that after the galvanic acupuncture he was conscious of certain definite and abiding sensations, and that these sensations did not occur on the application of the electrodes to the outer side of the skin. The impression first experienced was one of warmth in his feet and in his legs; this feeling of warmth was not confined to the parts immediately acted upon by the needles, but extended downwards to the extremities of his toes; the whole limb felt in a glow. He further noticed that as the parts became warm, the clammy perspiration which stood out in drops upon his feet entirely disappeared, and did not again trouble him for about twenty-four hours.

I may observe that in this case I must have inserted the needles some five or six hundred times during the last thirteen months, but have never, on any single occasion, observed any ill effects attend their application. I usually, as far as practicable, endeavour to avoid transfixing the larger arteries and veins; still, even if a vessel of considerable size be wounded, only a drop or two of blood is found to escape; as a rule, when the needles are withdrawn, no particle of blood is visible at the spot where the insertion was made. Indeed, the electric current seems to exercise certain well-marked hæmostatic properties.

(To be concluded.)

THE dispensary medical officers of Limerick Union have been appointed medical officers of health at a salary each of £25 per annum.

BEQUESTS TO MEDICAL CHARITIES.—St. Mark's Ophthalmic Hospital, Dublin, has received £50, a bequest by Miss Strangman; the Adelaide Hospital, Dublin, £100, a legacy from Mrs. Mary Dummett; and the Belfast Royal Hospital has been left £100 by the late Mr. Mullan.

ON

WOUND TREATMENT,

BY DRY AND INFREQUENT DRESSING, REST, AND PRESSURE.

BY SAMPSON GAMGEE, F.R.S.E.,
SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

(Concluded from p. 344.)

DEATH after two violent convulsions terminated Case 3 (THE LANCET, Sept. 6th, p. 342) at 7 P.M. on Sept. 2nd, the nineteenth day after admission, and the sixth day of tetanus. The wound continued clean, and granulated healthily, without any swelling, heat, or redness of the adjacent parts. A similar, but if possible more severe, injury, occurred in the youth, J. T——, whose case was not completed when noticed in THE LANCET of Feb. 8th, 1879 (p. 187). While passing between a wall and a horizontal steam engine in motion, the crank struck the right leg, tearing back the whole substance of the calf, to the extent of twelve inches by five. The outer heads of gastrocnemius and soleus, and both peronei muscles were completely torn through; the external popliteal nerve stretched like a cord across the chasm; the tibialis anticus protruded through the torn fascia, and the head of the fibula was smashed. Sutures, drainage, dry dressing, elevation, pressure, and absolute immobilisation in the extended position, were at once practised by my house-surgeon, Mr. Jordan Lloyd. The wound was only disturbed three times in the fortnight, when union was almost perfect; pulse 100; respiration 22; temperature 98·4°. The annexed woodcut (from a photo-

graph) shows the present state of the cicatrix, which extends across the popliteal space to the outer side of the leg, and down two-thirds of its length. Movements and sensation are perfect; and, in proof of good nutrition, here are the measurements round the two legs, taken four inches below the lower edge of the patella:—Right (the injured) leg, 13½ in.; left leg, 13¼ in.

And now for the fourth case of this series, in which a large and stinking spinal abscess has been treated under the carbolic spray with the most delightful result.

CASE 4.—W. C——, aged eleven, a pale, weakly, strumous lad (mother died consumptive), was admitted into the Queen's Hospital, under the care of my friend and colleague, Dr. Sawyer, on the 13th June last. He had had difficulty in walking for the last three months. On admission, the temperature was 101°, pulse 104; there was loss of power

over both lower extremities; a projection, tender on pressure, existed in the upper dorsal spine, which was rigid. Dr. Sawyer diagnosed strumous disease of the dorsal vertebræ and paraplegia; prescribed cod-liver oil and iron; and transferred the case to my care, while himself continuing to watch it, and giving me the benefit of his advice in consultation. A plaster-of-Paris jacket was applied with marked benefit; the lad regained the power of flexing and extending the legs, but continued unable to bear his weight on them. A swelling formed over the upper dorsal vertebræ, on a level with the highest part of the spine of the scapula; and it gradually developed into an abscess, with renewed and more severe paraplegia.

August 18th (noon).[1]—Patient lying on his right side, being unable to lie on his back. Skin hot and dry, lips parched, breath offensive, tongue furred. From the root of the neck to within an inch and a half of the inferior angle of the scapula is a fluctuating swelling, seven inches long and six across. The covering skin is red, hot, and very tender. The neck is thrust forwards so that the head forms an angle (about 45°) with the trunk. Cutaneous sensibility impaired in the lower limbs, which cannot be moved. Complete loss of power over rectum, and to some extent over the bladder. There could be no doubt that we had to deal with an acute abscess, producing great constitutional irritation and spinal compression. I resolved on opening it at once, under the carbolic spray, adhering most closely (myself and assistants) to all the instructions laid down by Mr. Lister. Through the incision, little more than half an inch in length, issued nine ounces of reddish-yellow matter, stinking abominably. Large-sized drainage-tube introduced, protective applied with swabs of muslin soaked in carbolic lotion, gauze dressing, mackintosh, and bandages. Improvement was immediate and rapid. At 7.30 the same evening, seven hours after operation, the temperature had fallen 3·4 degrees, the pulse 28 beats, and the respiration 2. To make it clear—

12.15 noon: temp. 101·4°; pulse 128; resp. 28.
7.30 P.M.: „ 98·0°; „ 100; „ 26.

At the latter visit the patient takes milk freely, and is quite easy; can flex and extend his legs and hold his motions; dressings changed under the spray, as the discharge had already made its way through those first applied.

19th.—Has passed a good night. Takes food well. Dressings changed because permeated with discharge, which is much less and void of offensive odour.

23rd.—Dressed each day, and drainage-tube shortened. Discharge now trifling in quantity and quite sweet. Power over legs steadily improving. Eats and sleeps well. Temperature 97·5°; pulse 92; respiration 26.

The Sayre's case having been removed as irksome and inefficient, I directed the application of a plaster case, extending from the top of the shoulders to below the hips, and so constructed as to admit readily of removal and readjustment. These indications were perfectly fulfilled by my house-surgeon.[2] The patient has continued to improve: he eats and sleeps well; his temperature is barely above normal; he is quite free from pain, has a good appetite and regular action of the bowels, can roll over in bed, and walks in the ward with slight assistance from a nurse.

In a lecture published in THE LANCET (Dec. 21st, 1878), after adducing reasons against the applicability of the germ theory to the repair of healthy tissues, I remarked—"But all wounds are not into healthy tissues—to wit, an incision into a joint filled with pus, an opening into a psoas abscess, or an empyema. It is in these cases that the argument of the germ theory is full of suggestiveness; it is in these cases, not improbably, that a special triumph will be reserved for Professor Lister's treatment. If so, the triumph will be a grand and glorious one. I for one shall most heartily congratulate my distinguished friend if experience prove the superiority of his plan of treatment in the exceptional pathological conditions just referred to." I hereby tender unreservedly, and with the utmost pleasure, the congratulations promised. The result in the brilliant case just recorded is unquestionably due to the measures adopted,—carbolic spray dressing and immobilisation. I shall not here stop to inquire whether the spray acted by intercepting and destroying the atmospheric germs, or by a chemical or pickling action. What I contend is, that it is an error to deduce from any number of such cases of fetid spinal abscess rules applicable to the treatment of wounds in healthy structures. *A priori* predication from physiological to pathological conditions has been one of the most fertile sources of error in the whole range of medical science. It cannot be conceded that the results of experiment in pathological conditions and dead organic matter, should, *à fortiori*, be held to apply to healthy states and living structures.

The very large concession which Mr. Lister made in commenting on my cases at the Midland Medical Society last autumn, was repeated in his recent address at the Dublin Richmond Hospital. He there said: "Somehow there is a peculiarity in living tissue, as distinguished from ordinary matter, that acts antiseptically, as we may say,—prevents the development of septic organisms, on the same sort of principle, probably, as a healthy living plant resists parasitic fungi."[3] I accept this as a concession of my position. Preserve and economise the power of life, and you will secure the working of healthy nutrition and repair, as opposed to pathological states and putrefactive decay.

Mr. Lister says nothing about pressure, but his address, from which I have quoted, shows that the value of immobility has dawned upon him. But he asks, "What apparatus can secure you against any movement as the result of spasmodic quivering of the muscles? We cannot reckon with confidence on this perfect immobility." With much deference, I refer to the results of my clinique as recorded in THE LANCET and my published works.[4] Look, amongst others, at Case 2, in this series. Having excised the ends of the bones for comminuted fracture of the humerus above the insertion of the deltoid, the limb was perfectly immobilised in a pasteboard case, and the wound dressed four times in fifteen days. The cicatrix was firm and dry on the 28th day; and the patient was discharged, with bony union, on the 14th inst., the fortieth day from the operation. Fixed and compressed as they were from the tips of the fingers to the root of the neck, how could those muscles quiver and those joints move? I took very good care they did neither.

To my regret, and I fear to the inconvenience of my readers, I have yet to trespass on their indulgence while I say something more on rest and pressure. This I purpose doing as I comment on Case 5, which is one of severe onychia and inflammation of the great toe.

I was consulted a short time since in the case of a middle-aged gentleman, of full habit, but without gouty history. Two months previously, while cutting the big toe-nail of the right foot he injured the end of the toe. It swelled and became painful. He had the advantage of attendance by two very able practitioners, who applied a variety of lotions, fomentations, and poultices, partially excised the nail, and had, in fact, as I was assured, done almost everything. The patient, in robust health, was confined to his bed, wholly disabled by the exquisitely painful toe. When I visited him in consultation I found a bread poultice secured on the end of the toe by means of a handkerchief crossed over the ankle. So timid was the patient that it was only after some little persuasion that he would allow me to remove the poultice. This done, and all its particles gently wiped off with a piece of dry soft lint, I exposed a big, tense, shiny red toe, exquisitely tender to the slightest touch. In the place of the nail was a dirty, reddish-grey sore. This I covered with a thin layer of muslin soaked in a solution of borax and glycerine. I enveloped the foot and

[1] I am indebted for these notes, and for the utmost care of the patient at the most critical stage, to Dr. Sawyer's house-physician, Dr. Wood, assisted by Mr. John Whitehouse, acting house-surgeon.

[2] The turtle-like shell was constructed by Mr. Jordan Lloyd in the following manner. The abscess having been dressed, the patient is laid flat upon the back and all clothing removed. Two pieces of thick common flannel—the material sold as "scouring flannel" is the best for the purpose—are then cut so as accurately to fit the front half of the trunk, reaching as high, in the median line, as the upper piece of the sternum, as low as the centre of the symphysis pubis, and laterally as far as the mid-axillary line, pieces being, of course, cut out under the armpits and along the groins, so as to allow of accurate adjustment; the lateral limits are therefore the floor of the axilla above and a point midway between the crest of the ilium and the upper border of the great trochanter below. This double thickness of flannel is then saturated in a thick mixture of plaster-of-Paris in lukewarm water and mucilage (B.P. 1 in 30), applied to the trunk over a double layer of lint, and accurately moulded by the hands until it is set (about two or three minutes). This cast must then be carefully lifted off and dried thoroughly before a fire. It is then laid upon the chest, and the patient turned on to the face. A double layer of flannel is now cut so as to fit the posterior half of the trunk, reaching laterally to within about half an inch of the chest-piece, and in the median line as high as the first dorsal spine and as low as the centre of the sacrum. It is then saturated in the plaster mixture, and similarly applied. It must be removed in two or three minutes, and dried before a fire. The cast may now be fixed to the body either by straps and buckles or by an ordinary calico roller; the latter is the simplest plan, and is perfectly efficient.

[3] Dublin Medical Journal, Aug. 1879, p. 108.

[4] On the Treatment of Fractures of the Limbs (London, Churchill, 1871); on the Treatment of Wounds (Churchill, 1876).

ankle in a layer of fine cotton-wool, applied a piece of moistened pasteboard to the sole of the foot, extending from a little beyond the heel to half an inch in front of the great toe, broad enough to embrace the tread of the foot. Across the ankle I placed two diagonal strips of moistened pasteboard, and fixed the whole with smoothly, but steadily, compressing bandage. The dressing was completed by fixing with a few turns of bandage a dry pasteboard splint to the sole of the foot, and securing the lower part of the limb in the hollow of a pillow, tied round it with a couple of pieces of bandage. The patient was immediately comfortable, and continued so. He passed a good night, and when I saw him next day was quite easy. On removing the dressing after twenty-four hours, the toe was comparatively pale and shrunken, and could be handled comfortably. I reapplied the same dressing, but with firmer pressure. Forty-eight hours later improvement continued without interruption. I found the toe still further reduced, and as the sore, though cleaner, was not yet quite clean, I brushed over it, and into the crevices at its root and sides, with a fine camel-hair pencil dipped in the following lotion:—Borax, half a drachm; compound tincture of lavender, a drachm and a half; glycerine an ounce and a half; water, six ounces. This application did not cause the least pain; and when I had once more immobilised and compressed the foot, I was able to drop it from the height of a couple of feet on to the couch without the least discomfort.

Valuable as dry dressing is in all recent wounds, lotions, similar to the foregoing in composition, are of essential service, when rightly employed, in foul wounds and old ulcers. The term "detergent" of the old surgeons has lost none of its fitness, and the therapeutic agents which it designates have lost none of their practical usefulness.

In the case (5) now under consideration the result was largely due to absolute rest. The value of rest no one questions; but what is needed is a more clear and precise understanding of the means to be adopted to carry it into effect. Rest, to be of real service in the multitude of surgical cases which are benefited by it, must be, as nearly as practicable, *absolute;* and the construction of immovable apparatus, suitable to the exigencies of particular cases, will be found to tax the ingenuity, and to demand the nicest combination of gentleness and strength. Pressure was another great factor in my patient's improvement. It was so partly, no doubt, as an aid to immobilisation, in unifying the parts of the apparatus and fixing the ankle and the smaller joints of the foot. But it must always be borne in mind that, whereas comparatively slight pressure, if hard and circumscribed, is painful; uniform, smooth, elastic pesssure, accurately applied, is most soothing. It acts by controlling the local circulation, preventing extravasation, promoting absorption of interstitial deposits, and lulling, to impotence for mischief, muscular spasm—that most potent cause of local and constitutional unrest.

A wrist-joint, hot and swollen after a heavy fall on the hand; an ankle after a slip and a twist, grown big and mottled and tender as a boil; a woman's pendulous, hot, tender breast, breeding an abscess; the fleshy, jumping stump of an amputated thigh, are one and all relieved, as if by magic, under steady, uniform, elastic pressure. That pressure of which the surgeons of the pre-Hunterian epoch had so clear a conception, of which old Baynton of Bristol wrote so quaintly, John Bell and John Scott so eloquently yet so tersely, is all but forgotten. Little better has been the fate of the teaching of those modern classics, the elder Larrey and Seutin. Few understand the principle of, fewer still practise, pressure as inferior to none of the cardinal therapeutic surgical agencies.

Rest and position, not as physiological abstractions, but as therapeutic agencies, carried out with all the resources and precision of surgical mechanics, are invaluable therapeutic resources, but it is only when combined with pressure that they enable the surgeon to realise the full power of vital endowment, to repair lesions and to resist the decaying tendencies inherent in dead organic matter.

Conceding the antagonism of putrefactive changes and vital processes, and the value of agents which prevent or neutralise the products of decomposition, it is narrowing the basis of surgical science, to the exclusion of some of its greatest resources, to concentrate the attention on antiseptic indications. On broad scientific grounds, Mr. Savory's protest against the expression "antiseptic surgery" claims assent. In the vast majority of wounds coaptation, once effected and steadily maintained, is followed by union. In such cases as a compound fracture, an amputation at the hip-joint, or ligature of an arterial trunk, frequent change of dressings to counteract germ infection is opposed to that great principle of REST, which, for local and constitutional reasons, is of the very essence of success. To assume as a general proposition, for revolutionising surgical practice, that infection exists ready made in the atmosphere, which only requires to be filtered of its germs as a condition precedent to the healing action, is to beg the whole question at issue, in the face of overwhelming clinical evidence to the contrary.

Birmingham.

WAYS OF REMEMBERING.

BY J. MORTIMER-GRANVILLE, M.D.

THE fact that there is a practical difference between *knowing* a thing and being able to *remember* it is sure to be brought home to the student in any branch of science, very early in his career. What precisely is the nature of this difference, and how is it to be adjusted? Before we try to find answers to these homely but earnest questions, let us expose and put out of the way a source of misconception which often occasions trouble and disappointment to minds admirably fitted for intellectual work, but inexperienced in the exercise of their powers and faculties. A man of acute and clear perception, endowed with a quick understanding, will comprehend a subject, take it in with a rapid mental glance, and seem to have made it his own. He "learns easily," but, alas, he forgets with even greater facility. The truth is that he has never *learnt* in any mnemonic sense. What he has done is to *apprehend;* and although the brain is undoubtedly capable of a process analogous to instantaneous photographing, it rarely performs this function at the behest of the will, unless it has been specially trained to do so; or when it does thus instantly receive an impression, the record is not permanent. The faculty of instantaneous mental photography is more commonly the agent of the subconsciousness than of the supreme consciousness, and it takes in the impressions we would gladly have effaced, while those it is desired to retain are obliterated almost as soon as they are registered. Apprehension is a function of the intellect which may be, and in the case of what are called "clever" persons often is, developed to a high degree of efficiency without any corresponding exercise of the recording faculty. Just as a man may work out a problem or perform an arithmetical calculation with perfect command of the data and processes involved, but in no way burden his mind with the details, or even the result of his work, if these do not personally concern him, he may concentrate attention and bring his reasoning faculties to bear on a subject of study and master its details, so as to obtain a clear comprehension of the whole while he is not registering any impression to form the basis of memory. Indeed, it is a notable circumstance that in a large class of minds the faculty of apprehension is developed, so to say, at the cost of that of mental registration or memory, the whole force of the intellect being, as it were, expended in understanding, while the storing of impressions is left to chance, which generally means that it is wholly neglected. It is therefore important to bear in mind that a quick understanding does not either involve or imply an aptitude for study. It is simply an effective power of perception, and is not uncommonly associated with a proneness to forget, which is in truth the effect of an absence or inefficiency of the faculty of mental recording. The distinctness and almost antagonism of these two functions of the mind, understanding and memory, is curiously apparent in the fact that idiots have often extraordinary powers of retention and recollection, while the most intelligent hearers and readers often find to their cost that they are the most forgetful. The student should not allow the consciousness he may have of a quick understanding to encourage him in the neglect to cultivate his memory, or be misled by a "good memory" to assume that he is endowed with high intellectual ability.

It is, undoubtedly, possible that the mind may be duly charged with a record of any subject or any information, and be unable to remember it at will. This circumstance arises from the fact that memory concerns the *method* of recording rather than the record itself. A piece of know-

ledge—if I may use the term—is often put away safely in the archives of memory, but no care has been taken to mark the place or leave a clue for its recovery when wanted. It may turn up at any moment, but cannot be produced by the will, for the simple reason that *will* has not been concerned in putting it away, or is not orderly in its action and trained to the task of re-collection. The difference between knowing a thing and being able to remember it is the difference between having a piece of property and knowing where to find it. The way to adjust this difference is to make the act of recording impressions a part of the process of receiving and shaping them. This is what some persons try to do by a recourse to what are known as "technical memories." Those who attach value to these devices must bear with me when I contend that they are not in harmony with the laws of psychology, and are therefore unscientific. It would be absurd to assert that they are useless, because everyone knows that "bodfi" has helped many a bewildered student to remember that the descending horn of the cerebral ventricle has a course *b*ackwards, *o*utwards, *d*ownwards, *f*orwards, and *i*nwards; but clumsy and needless tools have often been employed in good work and, nevertheless, wisely thrown aside when it was found that the work could be done much better without them. The natural and only true basis of memory is a well-formed impression. It is not essential that the impression should be fully understood at the time it is made, or the subject-matter wholly mastered by the understanding, but if the record is to be found by thought at pleasure, it must be registered by thought, and in such a way as to be easily recoverable. If the will is to control the act of recollection, it must be directly concerned in that of recording, and it will greatly facilitate the cultivation of a "serviceable memory" if the processes of apprehending and recording are studied together and intelligently combined or correlated.

The organ of the mind is connected by several lines of communication with the external; and impressions—or more accurately the agents of impression—travel more freely along some than others. One man will be more effectively impressed by what he hears than by what he sees, and so on. Probably, the deepest, clearest, and most permanent impressions are those made when the subject-matter is communicated to the brain by several senses at the same instant, or at least during the same observation. For example, the impression received from an object that can be seen, heard, felt, and perhaps brought under cognisance by the olfactory sense simultaneously, will be deeper and clearer than that of another object which can only be recognised by a single perceptive faculty. Nevertheless, most persons have a special aptitude for receiving impressions through some particular avenue of the senses, and it is important for the student to ascertain which is the most open and sensitive of the lines of communication in his individual case. A simple experiment, which may be described as follows, will, if carefully performed, supply the information desired. Let some other person write on a slip of paper, which we will call No. 1, six or eight familiar words consisting of a single syllable, in such order that they shall not have any connections of meaning or sense.[1] Let him next write the same words in a different order on another paper (No. 2), again avoiding any arrangement which might connect the words in thought by sound, sense, or meaning. The person to be experimented upon must neither have seen nor heard the contents of the two papers, or know the precise number of the words written. Now place the paper, No. 1, before him, and let him read it once only, and silently, so that no element of sound may be imported into the experiment. Then let the paper be removed, and let him at once write down from memory the words just read in their order. This should be done as quickly as possible, because the purpose of the experiment is not to test the permanence of the impression, but the readiness and clearness with which it is formed. As soon as he has written all he can recollect, remove the paper, without waiting for any correction or addition, and mark it No. 1 for reference hereafter. Next let the person who wrote the words on paper No. 2 read them once, clearly, at an ordinary rate, neither too fast nor too slow, and without any particular emphasis, and let the student after he has concluded immediately write down what he can remember. The result must be quickly removed with the same precaution as before, to avoid after-thoughts, and the paper marked No. 2. The process is then to be repeated in an inverse order, the words chosen being different, and the arrangement as heterogeneous as in the first stage of the experiment, but the oral reading being given first, and the paper which is read at sight subsequently. The papers containing the results are to be marked with the numbers corresponding to the test papers. The two sets of papers are now to be carefully compared, and a judgment found on the basis of general accuracy as to the words and their order. If no great difference is apparent in the results obtained, the experiment may be repeated with any variation, such as the substitution of figures for words, but the conditions must be carefully adjusted, so that memory is not helped, or the burden of the trial will be thrown on the recollection instead of on the faculty of receiving impressions. It will not generally be difficult to form a clear notion of difference between the aptitude displayed for receiving by ear and by eye respectively, and the readiest faculty will be the one on which it is safest to rely so far as *taking in* knowledge is concerned. The man who appreciates most readily by ear should not, as a rule, take notes at lecture, whatever he may do afterwards; while the student who is not so expert in receiving notions from the ear as by the eye may do wisely to take down a lecture in shorthand, or even write a full note, by way of impressing it on his mind. The latter will also probably find that he derives more advantage, generally, from reading books than from oral instruction.

It is, however, necessary to know more than this experiment has, so far, communicated. The faculty of reception is one thing, that of retention another. In order to explore the latter, it will be desirable to repeat the experiment already described with new word materials, and to allow an interval of, say, half an hour to elapse between the reading by sight and writing from memory, in the one case, and the same time between the dictation and writing in the other. Great care must be taken to render the intervals as nearly as possible equally distractive as regards the way the mind is employed, and by reversing the order of the sight and sound tests, as previously indicated, to correct any error likely to creep in from the fact that when the same words are brought a second time under cognisance they are, of course, recent or familiar. This further experiment will throw new light on the comparative efficiency of the two faculties as recording agents, but to obtain the full information required, the four sets of test and result papers must now be examined from another standpoint. The *nature* of the mistakes made is not less suggestive than the relative amount of accuracy. As a rule, persons who habitually remember by ear—that is, by calling to mind a *mental record* of sound—will, when writing from memory, make mistakes suggested by similarity of sounds; the words written, if not the right ones, will be of somewhat like sound; while specially soft-sounding words or syllables are likely to be omitted. On the other hand, those who remember by *pictures of thought or mental characters* are notably apt to substitute words that bear a general resemblance to each other in their own caligraphy, and to drop words or parts of words, as though writing hastily from an ideal copy. A very little reflection will make it apparent that by bestowing a few hours to the scrutiny I have suggested any man may obtain a considerable and useful insight into his individual way of remembering, and on the basis of the knowledge thus acquired he will be able to determine which of his powers it is best to cultivate. This initial point being settled, we may proceed to indicate briefly a few of the most practical methods of developing the faculty it is proposed to train to the highest attainable excellence, which, of course, will vary with the individual energy, intellectual force, and perseverance.

When the student knows that he takes in most accurately and remembers with the greatest readiness by sound, he should arrange his method of study so as to work this faculty directly. For example, he will be especially diligent in his attendance on lectures, and avoid as much as possible being distracted by sounds other than those which convey instruction. He will read aloud when studying in private, and impress the matters he desires to remember upon his mind by audible repetition, as a child learns his lesson by repeating it over to himself until he knows it. He will do more, bearing in mind the need of clues or threads of asso-

[1] If the number of words suggested should prove too great in any case a smaller one may be employed, but it is necessary that the words should be arranged so as to avoid any connexion, or the result will be misleading; the *ideas* will be less in number than the *words*, whereas it is essential that each word should represent an independent and distinct idea. Figures would do as well as words, but that they too readily combine to represent compound ideas, and for our immediate purpose we must use simple ones.

ciation by which to recover the matters put away in the brain, he will take care to create for himself in the act of learning a sufficient number of *sound*-links which shall connect the facts he desires to remember with others. The various technical formulæ constructed by teachers and recommended to the student fail first because they are not the creation of the mind which employs them; second, because they are non-natural and arbitrary; and, third, because, the essential difference between a faculty of remembering by *sound* and by *sight* not being recognised, the formulæ adopted are often uncongenial. Each student ought to make his own connecting links for ideas, and they should be natural, scientific, and appropriate to his special faculty. The man who remembers by sound will find it easier and better to remember a chemical decomposition, the characteristics of a bone, or the relations of an artery by some formula which connects them by sound than by trying to *picture* the subject, while the reverse will be the case with the man who remembers by sight. The latter must fancy he sees the object or recall to mind some written or printed description of it before he can remember the details. The man with a memory for sounds will do wisely to employ that faculty constantly. The voice of his teacher will help him, the sounds of letters, even a sort of musical notation which he will construct for himself intuitively, will contribute to the efficiency of the service sound renders him. The points for him to bear in mind are that in learning sound-links or connexions must be formed, and in *remembering* the posture of mind should be one of mental listening, because it is through a thought-sound the matter will be brought back to the consciousness. When, on the other hand, sight is the readiest mode for the reception of impressions, and is also the medium of memory, the aim must be to *picture* every matter it is desired to remember either in the shape of an ideal image of the object, or a written or printed description of the subject.

Professors of memory, taking advantage of the large number of persons who remember by mental *imagery*, have developed the system of teaching by pictures to great perfection. With the aid of a few mental images of squares, or figures more or less simple, they will enable a very dull scholar to "recollect" the most complicated figures and dates, or a seemingly bewildering array of facts. The formula of memory is in all these cases associative, and the lines or spaces employed to fix the several objects of thought stand for the connecting links. Every way of remembering is, as I have said, a process of link-making, and when a simple formula can be made to serve a variety of purposes—acting as the frame for a multitude of pictures—the task is simplified, and the result, for a time at least, proportionately certain. A picture-memory requires that the threads or connecting-links by which any subject is to be recovered shall be pictorial; and to make the process natural these links should be as far as possible the actual surroundings of the object to be remembered. The student who has a memory of this class should learn his anatomy from personal dissection, and it will help him greatly if he can draw so that the subjects of thought may be impressed on the mind by sketching. Such a man will do well to employ the pencil more than the pen, and even in the study of a subject like chemistry to employ diagrams largely. There is scarcely any topic which may not be illustrated by figuring of some kind, and the hieroglyphics employed ought to be of the student's own personal devising, except when a teacher has first presented the facts pictorially, in which case it is better to accept and adopt the original imagery, on account of the strength of first impressions, and the confusion that might be caused by changing the symbol. A common error into which beginners are apt to fall is to try to combine, and therefore confuse, the two methods of remembering—by *sight* and by *sound*. They should be kept carefully apart, and only one adopted—whichever is found to be the most natural and susceptible of culture, in conformity with the law of development, which makes growth and efficiency the fruits of exercise.

A close scrutiny of the results obtained by the experiments above suggested will show that there is a class of cases in which knowledge is received by one line of communication and remembered by another. The *number* of errors may be greater when writing from sight or sound respectively, while the *nature* of the mistakes made points to the other medium as the agency concerned in remembering. When this happens, it will be needful to cultivate the two faculties side by side, and this may seem to create a difficulty. In practice, however, it is easy to make the requisite discrimination, and after the learner has matured his method of study he will find that the doubling of the process really economises time by improving the quality of the work done. The feat to be accomplished is simple enough, and bears a close analogy to the procedure of an arithmetician, who "proves" his sum; having added, he subtracts, or the converse. So the learner by sight who remembers by sound must take in his subject by pictures or characters, and practise reproducing a verbal account of them. If he *hears* most readily and remembers by *sight*, he will do well to listen, and, as I have said, read aloud when studying, then come away, or close his book, and proceed to picture what he has been thinking about, and draw or write a description of the imagery, to impress it permanently. This is what hundreds of persons do unconsciously, and if the process be necessary in any case it will be found to be natural and easy.

There is nothing novel in these suggestions beyond the recommendation of a formal experiment to ascertain which of the several sense communications is the most available for practical purposes. All that I have indicated as desirable to do is done intuitively by expert scholars; but as intelligent and self-controlled beings, we ought to know the nature and purpose of every intellectual process, and to the young man entering on a career of special study it will be helpful to receive a few hints as to the best mode of procedure. It does not concern the student standing on the threshold of his field of inquiry to know in what the physical bases of memory consist—if, indeed, anyone is in a position to give him precise information on the subject,—but it is of use to him to be told *how* he remembers, and how to choose the readiest and most effective instrument for the task he has to accomplish. It is a higher and better thing to possess the power, and know where to acquire information when it is wanted, than to carry about knowledge as a pack-horse bears his burden. At the same time there is so much which it is indispensable the student should learn to hold in memory, that I venture to offer these few hints as to "ways of remembering."

THE ANTISEPTIC METHOD IN RELATION TO DRAINAGE OF THE PERITONEUM IN ABDOMINAL SURGERY.

BY J. KNOWSLEY THORNTON, M.B., C.M.,
SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.

(Concluded from p. 430.)

CASE 7.—The patient was a single woman, aged thirty-five, with an enormous multilocular tumour. She came into hospital with well-marked symptoms of mischief in the cyst, which had been tapped some months previously, though only a small quantity of fluid was then obtained. She was jaundiced, and had a rapid, weak pulse; morning temperature generally over 99°, afternoon and evening from 101·4° to 102°. The operation was a difficult one. The cysts (there were three or four much of a size) all contained a mixture of ovarian fluid and a brown clot-like material, with a distinctly unpleasant odour. I had to break up the septa, and pump this material out with my hand; much of it necessarily flowed over the wound, and though I was careful in washing it away and cleaning my hands in strong lotion as often as possible, I could not feel any confidence that I did not introduce causes of putrefaction into the peritoneum. Extensive and very vascular adhesions had to be separated, and both ligatures and cautery were used to control the hæmorrhage. The peritoneum also poured out serum freely, and I therefore decided to put in a tube in spite of a very careful cleansing of the abdominal cavity. The patient did not do well from the first; but at the second dressing there was no discharge in the sponge and very little in the tube. Not being satisfied with her general condition, and as to the asepticity of the operation, I left the tube in. Next dressing there was more discharge, then more, till it soaked through everything; the pulse getting weak and rapid, and flatus passing badly. At the eighth dressing, remembering the first case, and not sufficiently considering the difference in

the general symptoms, I removed the tube and closed the opening. Rapid septicæmia then clearly showed itself, and though I reopened the wound, and reintroduced a tube, it was useless. All secretion seemed stopped by the rapid poisoning. It is useless to theorise as to the cause of putrefaction: whether introduced at the operation, or whether creeping up when the dressings were rapidly soaked with serum. I think probably she would have died exhausted even if I had left in the tube. I am sure removing it killed her. Possibly if I had never put it in, or had removed it when the discharge was so small at the second dressing, all would have been well. In any case tapping was the actual cause of death. So far as drainage is concerned, the case merely enforces what I shall say further on as to the method of drainage in these doubtful cases. After withdrawing the tube I found the serum full of large, motionless, rod-shaped bacteria. I ought to have examined it before I withdrew it, but acted hastily on finding her strength running down so fast.

CASE 8. — This was also an instance of putrid cyst, the result of tapping before the patient came under my care. She was weak and exhausted, with high temperature, and feeble, quick pulse. The operation was a severe one, and the tumour was very large. After removing it I found a dilatation of the opposite Fallopian tube; its connexions were such that a complete removal of it would have much prolonged the operation, and I therefore opened it and cleared it out. I left it, as I thought, quite safe, the glass drainage-tube passing down close beside it. The operation was a forlorn hope, but I trusted much to the tube. It signally failed to give notice of the one danger I had always believed it to be a complete safeguard against. The patient died suddenly four hours after the operation. I was sent for, but arrived too late; and, finding no sign of discharge from the tube, concluded it was sudden syncope. The post-mortem showed that death was due to hæmorrhage from the opened Fallopian tube, nearly two pints of clot having oozed from it. This clot completely surrounded the glass tube, and yet it gave no warning, though it was a very large one, perforated with large holes.

CASE 9.—Removal of a cyst which had been explored and drained, and was discharging fetid pus at the time I operated. I used glass and india-rubber tubes in this case. It was very tedious, but, as it was putrid from the first, it does not concern us here. I only mention it, as I attempted to perform the operation antiseptically.

CASE 10.—An old woman; tumour involving both ovaries; omental, mesenteric, intestinal, uterine, and general pelvic adhesions. The cyst had been tapped before she came to me, and I therefore put in a tube. The glass tube was in sixty-six hours, and an india-rubber one forty-eight hours more. I believe the patient would have done as well or better without drainage; but little came away, and while the glass tube was in there was difficulty in the passage of flatus. Convalescence was much prolonged, and when she left the hospital, thirty-two days after the operation, there was still a small granulating sore where the tubes had been.

CASE 11.—Very similar to the last, except that the patient was young. The cyst had also been tapped before she came under my care. I again used one of Mr. Meredith's curved tubes, and found it answer admirably. So little discharge came away that I did not disturb the dressing for twenty-four hours after the operation, and in forty-eight hours withdrew the tube, and was so satisfied that all was aseptic that I closed the opening with the tube-sutures, contrary to my rule in cases which have been previously tapped without antiseptic precautions. The patient never had a drawback, and left the hospital seventeen days after the operation.

So much for the cases in which I have drained. Looking carefully through my note-books, I find twenty-eight cases of ovariotomy in which I should certainly have drained had I not trusted to antiseptics.[1] Only one of these died, the case I have already referred to as having made me doubt whether drainage could be dispensed with. She had, however, been several times tapped without antiseptic precautions. The tumour was an enormous one (75 lb.), and the patient a very bad subject. Moreover, her size was so great that I am not at all sure that my one spray producer was sufficient. A tube *might* have saved her. With my present views as to the possibility of dormant mischief in cysts, after tapping without antiseptics, I should of course have put one in.

In some of the above twenty-eight cases there was fever and trouble with the passage of flatus, and one or two of them were very ill. I shall have more to say about them at some future time in relation to "absorption fever" and aseptic peritonitis.

Five cases among the twelve non-ovarian operations deserve mention, as I should certainly have drained in all of them without antiseptics.

One was a case I have already published separately.[2] There was a good deal of trouble with flatulent distension, due, I believe, to the intestines being bathed with bloody serum. It would, however, have been impossible to drain in this case, owing to the presence of the pregnant uterus, and the ultimate result might not have been so satisfactory had it been possible.

Another of the cases I have already referred to when publishing "Fifty additional Cases of complete Ovariotomy."[3] The patient never had any bad symptom, though her peritoneum contained a large quantity of bloody serum, and had cancerous cysts discharging into it.

The third and fourth were cases in which I explored, and found papillomatous tumours fungating, and already involving the peritoneum to such an extent that any attempt to extirpate them was hopeless. In both I removed masses of papilloma, and in the fourth made a vigorous, but unsuccessful, attempt to raise a large fibroid uterine outgrowth out of the pelvis. In both hæmorrhage and serous oozing were very free, and were still going on when I closed the peritoneum, and yet both recovered quickly without high temperature or quick pulse, and both were much relieved by the operation.

The fifth was a case of fibro-cyst of the uterus, which I am publishing separately, so I will not refer to it here farther than by saying that there was fever and evidence of a large collection of fluid in the pouch of Douglas, which was kept clear of the intestines by prolapse of the pouch (rectocele), and hence gave no trouble with irritation of intestines and consequent flatulent distension.

In one of the twenty-eight ovariotomies referred to above, the peritoneum had long been full of ovarian fluid, and there was extensive chronic peritonitis. The peritoneum was *distended* with fluid for some days after the operation, and yet the patient never had a bad symptom, and left the hospital sixteen days after the operation, as she was quite well, and anxious to eat her Christmas dinner at home.

In one case, in which I removed a large fibroid outgrowth from the uterus during the seventh month of pregnancy, the result was different. The patient was a living skeleton, and in a very bad state. She was confined the night after the operation, and died on the fifth day of obstruction of intestine, the obstruction being due to intense enteritis of a coil of intestine, which was lying in a cavity full of bloody serum. It would have been impossible to drain, had I thought of doing so, and I believe this is just one of the rare cases in which the extremely low vitality of the patient prevents any effort at absorption, so that the irritation of the gut, being continuous, rapidly passed on to acute inflammation and complete paralysis; exhaustion from the stercoraceous vomiting being the actual cause of death.

When writing a paper on drainage towards the close of the septic period, a paper which I never published, I concluded as follows: "When in doubt drain, and never withdraw the glass tube without replacing it by a carbolised india-rubber tube, to be gradually shortened as discharge ceases." I shall still give the same advice with regard to cases in which, from previous tapping, or other cause, we cannot be sure of the asepticity of the case. And I will say that while we are in doubt as to the fever-inducing power of mixtures of blood and serum &c., and as to the danger of spreading aseptic peritonitis arising from accumulations of such fluids, it may be well, in a few exceptional cases, where the patient is in a low state of health, to drain for a few hours or days after a complicated operation (i.e., until we see if much serum is formed); but in these cases I would advise the insertion of a tube-suture at the time of operation, left loose and to be tied when the tube is withdrawn. This prevents a weak place being left in the cicatrix, and hastens

[1] Of course these figures do not include many cases operated upon in which there was no necessity to entertain the question of drainage.

[2] Removal of Hydatids of the Omentum and from the Pelvis during seventh month of Pregnancy; Recovery.—*Med. Times and Gazette*, Nov. 16th, 1878.

[3] Fifty additional Cases of Ovariotomy, &c.—*Brit. Med. Journal*, Oct. 19th, 1878.

convalescence. In such cases I should withdraw the tube as soon as the discharge ceased to overflow into the sponge, *if the general condition of the patient, and the progressive decrease of discharge, gave evidence of asepticity.*

I have already enumerated the disadvantages and dangers arising from the use of the tube. That they are real is amply shown by the quotation I have given from the paper of such a staunch advocate of drainage as Dr. Keith. These dangers seem to me greater than those we run by non-drainage in thoroughly aseptic cases. In fresh cases, and with a careful adherence to the teachings of Lister, or, in other words, with aseptic cases, and proper antiseptic precautions, I believe the need of drainage has passed away; at any rate, cases requiring it must be very exceptional.

Park-street, Grosvenor-square.

THE ACTION AND USES OF HYOSCYAMINE.

BY ENGLEDUE PRIDEAUX, L.R.C.P. LOND., &C.,
ASSISTANT MEDICAL OFFICER, THE FRIENDS' RETREAT, NEAR YORK.

HYOSCYAMINE, the active principle of hyoscyamus, has not until recently been the subject of physiological and therapeutical researches. It has generally been stated to be almost identical in its action with atropia, and by some authorities it has been supposed that they are one and the same alkaloid; at the same time there has been a considerable discrepancy between the results of different observers, and consequently a great difference of opinion as to its power, and the exact effect it produces. These results have arisen from the great difficulty there has been in obtaining anything like the pure alkaloid. I believe its chemical constitution is still unknown, nor is there any distinctive test for it.

There are at present several kinds of hyoscyamine to be obtained in the market, which vary exceedingly, both in their appearance and in the effects produced by their use. It appears to have been first produced by Geiger and Hesse, who stated it to separate out of chloroform and benzole as crystals, and out of ether and alcohol as amorphous. In 1873, Dr. G. Merck extracted it in the form of a soft amorphous mass, which when distilled in an atmosphere of hydrogen produced a colourless oily liquid, resembling nicotine and conia. This he considered to be the true base. In contact with the air it browns, thickens, and gives off a disagreeable smell. It has a strong alkaline reaction, and completely neutralises acids. The salts are very soluble, and only obtainable with great difficulty. Lately I have received from Dr. Merck a specimen of hyoscyamine in its purest form. It is in small white fragments, of an apparently amorphous character, but which he terms crystalline. This is, however, very expensive, from the difficulty of crystallising it out; and, weight for weight, is not more powerful than the best samples of the extractive form, whilst the therapeutic value of its effects I have not found to be so great. It has an advantage, however, that it is the pure alkaloid, and therefore more to be depended upon than the extractive, which latter I have found to vary somewhat in different samples. Dr. Merck's extractive hyoscyamine, which is easily obtainable at a moderate price, is quite as effective for ordinary purposes as the crystalline. It is a dark, treacly mass, of a greenish tinge, with a very disagreeable mousey smell. It is best kept for use by dissolving it in a mixture of spirit of sulphuric ether, alcohol, and water, in the proportion of one grain in twenty-four minims—viz., alcohol, eight minims; spirit of sulphuric ether, six minims; water, ten minims. It may be given hypodermically as it is, without further dilution, or, if a very small dose is required, to one grain in forty-eight minims, by the addition of equal parts of spirit and water; and it may be diluted to any extent with water and any flavouring syrup for administration by the mouth; one grain, that is twenty-four minims of the concentrated solution, put in an eight-ounce bottle, and filled up with two ounces of orange syrup and water, is quite sufficiently diluted for administration by the mouth. The concentrated solution made according to the above formula will keep for a long time without change, whereas a dilute solution very soon changes and becomes inert.

It is necessary to use, in order to have reliable results, that form of extractive which is prepared from the leaves; it is more to be depended upon than that prepared from the root. The former has always a dirty greenish tinge from the presence of chlorophyll, and the concentrated solution of it resembles tincture of digitalis, whilst if the extractive be prepared from the root a concentrated solution of it resembles tincture of myrrh.

The most trustworthy series of experiments on the physiological action of hyoscyamine are those of Laurent,[1] Harley,[2] and more recently those of Dr. Lawson.[3] There appears to be no reason to doubt that, although there is a very great similarity in the action of atropia and hyoscyamine, they are essentially different alkaloids. One difference to be observed is, that certain of the lower animals and birds which are comparatively tolerant of atropia are far more sensitive to the effects of hyoscyamine. For instance, although pigeons may recover from three grains of atropia, half a grain of hyoscyamine is sufficient to kill a full-grown bird.[4] In the rabbit many grains of atropia are required, yet one grain of hyoscyamine will produce intense physiological action, and frequently death.

The following are the results of its administration from a physiological point of view, deduced from a large number of observations extending over a considerable period of time, and to the suggestion of which I am mainly indebted to Dr. Lawson's papers; and I can corroborate his results, except that I find that very much smaller doses produce the effects he describes, and am inclined to think that the preparation he used was not so pure as that at present to be obtained.

The ingestion of a small dose of hyoscyamine is followed by a reduction of the pulse-rate, accompanied by increased strength, and a diminution of the respiratory act. This is very marked if there is any unnatural excitement at the time of administration. This is again followed by an almost immediate quickening of the pulse-rate, coincident with which occurs cerebral excitement, followed by motor paralysis, and by loss of power over the co-ordinating centres, as shown by the speech and vision becoming affected. The appearance and conduct of the person resemble that of a drunken man; he staggers, falls, sees double, and talks with a thick and stuttering speech. After this there ensues a hypnotic stage of longer or shorter duration, according to the dose and peculiarity of the individual. Accompanying these symptoms there is always great dilatation of the pupil, hypermetropia, and dryness of the throat and skin. The drug is excreted by the kidneys, and to some extent by the intestinal canal.[5]

When given in a large dose it produces a powerful and continued increase of pulse-rate, a diminution of the respiration, and a fall of temperature. This is accompanied by delirious excitement, and followed by a prolonged sleep. The effect upon the circulation appears to be produced by its action upon the sympathetic and pneumogastric nerves, the former of which it stimulates and the latter it paralyses, so that if the heart's action be rapid and feeble from want of tone, by stimulation of the sympathetics the blood-pressure is increased and the pulse-rate lowered, and when the action of the drug becomes most manifest, or the dose is large, then its paralysing effect upon the pneumogastrics, by reducing their inhibitory power, tends to increase the heart's action, and in very large doses death sometimes occurs.

The influence of hyoscyamine upon the respiration is similar to that upon the pulse-rate. It not only reduces the respirations to their normal condition, if excited, but if the dose be more than a very small one it continues to reduce them, and if the dose be fatal the respirations become diaphragmatic before the cessation of the heart's action, which may continue for some seconds afterwards. This condition, produced by a fatal dose, is accompanied by a steady decline of temperature. These effects, clearly shown from Dr. Lawson's experiments to be produced by a poisonous dose—viz., a great acceleration of the heart's action, steady fall of temperature, and rapid diminution of respiratory movements, seem to prove the paralysing effect upon the pneumogastric produced by hyoscyamine. The dryness of the skin and fauces produced by the drug indicates an action upon the peripheral nerve-filaments similar to that of atropia. Dr.

[1] De l'Hyoscyamine et de la Daturine. [2] Old Vegetable Neurotics.
[3] West Riding Reports for 1875 and 1876. [4] West Riding Reports.
[5] West Riding Reports.

Lawson proved, by tying the femoral artery in one leg of a frog, and testing its motility against the other leg, that the motor nerves are themselves partially paralysed, and, to some extent, the sensory. He also records that increased vascularity of the corpora striata occurs in animals poisoned by the drug. The loss of motor power is probably partly due to this influence upon the motor nerves, but it is the great want of co-ordinating power which is most manifest, and leads to the staggering gait and aphasic condition resembling alcoholic drunkenness; and this is more probably due to the effect of the drug upon the cerebral centres. Upon the spinal cord hyoscyamine appears to produce no effect, and herein it differs in a marked manner from atropia, which is stated, principally from the observations of Dr. Fraser, to be a decided spinal stimulant.[6] Also in cases of toxic doses of atropia, convulsive and tetanic spasms have been stated to occur, whilst none of the experiments of Dr. Lawson have tended to show that it had any such action. In one instance tetanic spasms certainly took place in a rabbit before death, but the experiment was performed to test the purity of the sample, which was suspected, and the results, of which this was one, appeared to point to its containing another alkaloid besides hyoscyamine.

In man the symptoms produced by the administration of hyoscyamine are the same as those produced upon the lower animals, although they vary somewhat in their relative degree, and the dose for a man is much less in proportion than that for an animal. In man the relatively cerebral symptoms are apparently more marked than the cardiac, respiratory, and thermal symptoms; the motor symptoms vary considerably according to the individual. From the increase of the cerebral symptoms it has, as regards man, more of the character of a hypnotic, and produces sleep, sometimes of considerable duration, particularly in conditions of the brain where there is great excitement, as in mania, delirium tremens, meningitis, and where ordinary hypnotics, such as opium, are inadmissible, and others, as chloral, have failed or exhausted their effect.

(To be continued.)

OBSERVATIONS
IN REFERENCE TO THE
MANAGEMENT OF PATIENTS WITH PROSTATIC ENLARGEMENT.

By REGINALD HARRISON, F.R.C.S.,
SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

PATIENTS long before reaching the confines of threescore years and ten, some by anticipation, others by a realisation, of the earlier symptoms of prostatic enlargement, not unfrequently ask advice as to how they may keep in abeyance the graver symptoms and complications of this affection. In advising such persons, I have for some years been in the habit of laying stress upon the following points:—

1st. To avoid being placed in circumstances where the bladder cannot be emptied at will.

2nd.—To avoid checking perspiration by exposure to cold, and thus throwing additional work on the kidneys. In climates such as our own, elderly persons should, both in summer and winter, wear flannel next to the skin.

3rd. To be sparing of wines, or of spirits exercising a marked diuretic effect, either by their quantity or their quality. Select those which promote digestion without palpably affecting the urinary organs. A glass of hot gin-and-water, or a potent dose of sweet spirits of nitre, will not do anything to remove the residual urine behind an enlarged prostate.

4th. To be tolerably constant in the quantity of fluids daily consumed. As we grow older our urinary organs become less capable of adapting themselves to extreme variations in excretion. Therefore it is desirable to keep to that average daily consumption of fluids which experience shows to be sufficient and necessary. How often has some festive occasion, where the average quantity of fluid daily consumed has been largely exceeded, led to the over-distension of a bladder long hovering between competency and incompetency. The retention thus occasioned, by suspending the power of the bladder, has often been the first direct step in establishing a permanent, if not a fatal, condition of atony or paralysis of this organ.

5th. It is important that from time to time the reaction of the urine should be noted. When it becomes permanently alkaline in reaction, or is offensive to the smell, both necessity and comfort indicate the regular use of the catheter. If practicable, the patient may be instructed in the use of the instrument.

6th. Some regularity as to the time of performing micturition should be inculcated. We recognise the importance of this in securing a regular and healthy action of the bowels, and though the conditions are not precisely analogous, yet a corresponding advantage will be derived from carrying out the same principle in regard to micturition.

The sum of these instructions is, that inasmuch as we cannot arrest the degenerative changes by which the prostate becomes an obstacle to micturition, it becomes of the first importance that every means should be taken to compensate for this by promoting the muscularity of the bladder and preventing it becoming atrophied or paralysed either by accident or improper usage.

When, in connexion with hypertrophy of the prostate, the bladder ceases to expel its contents, I would lay stress on the importance of attempting, without loss of time, by mechanical and other agencies, to restore its power. To do this and to bring about a healthy condition of the urine, which is about the best stimulant that can be applied to a weakened bladder, I introduce and retain a gum-elastic catheter. To this is attached a piece of rubber tubing, through which the urine escapes as it is excreted, and is collected in a receptacle placed by the side of the bed. Thus urine is not allowed to be retained for a moment. Much depends on *how* all this is done whether it proves a source of comfort or not to the patient. If it is done properly—that is to say, if the utmost cleanliness in every detail is employed, changing the catheter twice a day (thoroughly disinfecting the catheter used with carbolic lotion), and adding to this, if necessary, a daily ablution of the bladder and urethra with some unirritating disinfectant, great relief will be experienced. Under such management I have frequently noted that the reaction of the urine, which may for some time have been alkaline, becomes acid. This alone indicates that there is now no stagnation. When the urine becomes healthy in character, I substitute for the retention of the catheter its introduction at regular intervals, allowing the patient to get up and go about.

Of the medicines that I have found most useful in restoring, in conjunction with mechanical means, the tone of the bladder, I would mention the ergot of rye, which I generally give in doses of twenty to thirty minims of the fluid extract in cinnamon-water. Of its use, further experience only strengthens the good opinion of it I have elsewhere expressed in the treatment of this complication of prostatic enlargement.

Liverpool.

[6] Wood's Therapeutics.

THE SYSTEMIC FACTOR IN THE LOCAL USE OF MERCURIALS.

By GEO. P. BEST, B.A., M.B. (CANTAB.), M.R.C.S.E.,
RES. MED. OFFICER, KILBURN GENERAL DISPENSARY.

A. B——, aged twenty-six, 'bus conductor, came under my care two months ago, suffering with five excavated ulcers surrounding more or less the left leg. They were elliptical in shape, of various sizes, the largest having the respective diameters of six and three inches, the smallest an inch and a half and one inch. Their appearance immediately suggested syphilis. The right leg was without spot. In a rapid examination I could get no account of the primary infection or of the first appearance of secondary symptoms; and as the wife was by, and I did not think there was any immediate necessity for prosecuting inquiries into the exact history, without more ado I put the patient on ten-grain doses of iodide of potassium with ammonia, and black wash to be applied to the sores. In three days' time the ulcers showed signs of improvement, but the patient complained of pain at the angles of the lower jaw, difficulty in opening the mouth, and looked somewhat swollen in the face about the region of the submaxillary glands. As the weather

was very cold at the time, and he had been sitting near an indifferently fitted window, I thought this might have been due to "cold"; and when, on my inquiring whether he had ever suffered similarly, or from salivation, previously, I was answered in the negative, I dismissed from my mind the idea which suggested itself, that he might be suffering from the liberation (by the iodide of potassium he was then taking) of the deposited mineral of a possible previous mercurial course. I thought (in a loose way, truly) that the iodide might have something to do with it; but as the symptoms were not urgent, I left them to be cleared up at my next visit. Three days afterwards the ulcers were greatly improved, but the mouth symptoms were inversely aggravated, though there was nothing that could be called salivation. There are many "happy thoughts" which, unfortunately, do not present themselves at the first opportunity; and I must admit that the idea that the patient was suffering from the specific stomatitis due to mercury, which was being absorbed by the ulcerated surface of the leg, and that he was then and there under the full influence of the mineral, did not strike me till then. Acting upon this idea, but still with the feeling of experimenting, I changed the black wash for a simple antiseptic lotion, continuing the iodide internally; and I was not disappointed to find the stomatitis subside, while the rate of healing of the ulcers was markedly retarded. I now directed the patient to dress half the ulcerated surface with black wash. The old rate of healing was again attained for all the ulcers, though the granulations of those which had to be content with the antiseptic lotion did not exhibit the robust health of those of their more fortunate rivals under black wash. But by alternately and impartially favouring first one half and then the other, the rapid rate of improvement has been steadily kept up, and to-day, at the end of the eighth week, the ulcers have so far contracted that I expect they will have quite healed in another fortnight. The smaller surface has now for some time been treated entirely with the mercurial lotion, and there has been no recurrence of the mouth symptoms.

The above case illustrates a point, and suggests a query. The point: that the system may be brought under the *full* influence of mercury by absorption thereof by ulcerated surfaces sufficiently large. The query: how far, in those cases of syphilis in which mercury is used locally to ulcerated surfaces, however moderate, we are justified in ignoring the constitutional influence of the drug as a factor in the success of treatment?

The case further exemplifies two other points, which, though obvious enough, he that runs may *not* read—to wit, complete asymmetry of lesions undoubtedly syphilitic, and beneficial influence of constitutional effects of mercury in lesions usually considered tertiary; on which latter the further question might arise whether, had the mercurial been administered by the mouth instead of through the ulcerated surface, the benefit would have been up to the same mark.

I append the following particulars:—Patient has been two years three months married. Twelve months ago had skin eruption over chest, back especially; never noticed such a thing before; but four months after marrying entered as a patient at a London hospital for ulceration of leg less extensive than that which came under my treatment. At the time of marriage had "three small holes"; sore-throat never. Has one child, aged seventeen months, healthy. Wife healthy, five months gone in family way; never miscarried.

A CASE OF POISONING WITH BICHROMATE OF POTASH.

BY A. DUNBAR WALKER, M.D.

DR. TAYLOR, in his book on Medical Jurisprudence, writes: "Well-observed instances of poisoning by this compound (bichromate of potash), which is now extensively used in the arts, are rare," so I venture to think that the following case may be of interest to the profession.

Carl K——, a German, aged twenty-seven, was suffering from urticaria, and, being advised to take bicarbonate of potash as a remedy, went to a chemist and asked for an ounce of that substance. From his guttural pronunciation, the chemist understood him to ask for bichromate of potash, and accordingly gave him an ounce of it. At noon, when he arrived at his office, he proceeded to take a drachm of his medicine (as he thought) dissolved in half a tumbler of water. Five minutes after taking the draught he was seized with violent sickness and purging, which returned at intervals of ten minutes. Notwithstanding this he continued to perform his office work for an hour, but becoming faint and feeling very cold, he lay down before the fire.

At 2 o'clock in the afternoon, just two hours after he had taken the poison, I saw him, and found him with a pale and anxious countenance; pulse feeble and irregular; surface of the body cold and clammy. Shortly after I saw him he passed a very liquid stool, that seemed to rush from him, consisting chiefly of serum. Being ordered to bed, with hot bottles to his feet and legs, he continued to vomit. The rejected matter consisted of water that had been given him to wash out the stomach. The patient complained now of cramps in the abdomen and legs, with severe colic. The surface of the body was still cold and clammy, the fingers and hands being quite blue. From the pain he was suffering, small doses of tincture of opium were given, which the stomach retained. This emboldened me to try a little nourishment, consisting of egg-and-milk, but this was rejected after a quarter of an hour. The purging became less severe and occurred at longer intervals; the surface of the body became warmer; the sickness almost ceased, so that nourishment was retained; and by 10 P.M. a complete reaction had set in. His pulse was now 120, from being 80, and altogether he felt comfortable. During the night he slept at intervals, and passed two motions, which consisted chiefly of undigested milk, which he had been ordered to drink. The next day he passed seven evacuations of a pea-green colour, more consistent in substance. His pulse became normal, and he was able to take a considerable amount of liquid nourishment. In a day or two he was convalescent, and seemed to have suffered in no way from his unfortunate dose.

Ladbroke-grove-road, Notting-hill, W.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

PRIMARY AMPUTATION OF THE LEG FOR COMPOUND FRACTURE; SECONDARY HÆMORRHAGE; AMPUTATION AT THE KNEE; RECOVERY.

(Under the care of Mr. JOHNSON SMITH.)

ROBERT S——, aged forty-four, costermonger, of intemperate habits, and the subject of long-standing paralysis of the left upper extremity, was admitted on Oct. 11th, with extensive compound and comminuted fracture of both bones of the left leg in the lower third, caused two hours previously by a large beer-barrel falling on the limb.

Primary amputation was performed in the upper third of the limb, with a short anterior and a long posterior flap. The operation was performed under antiseptic conditions; a drainage-tube was placed between the flaps, and the stump was enclosed in gauze.

From the 14th to the 19th of October the patient suffered from a very severe attack of delirium tremens, and subsequently there were delirium and much restlessness every evening until the 24th. On the third evening the temperature was 101·8°, but after this did not rise higher than 100·4°, except on one occasion. In the morning it was usually 98·6°. Notwithstanding some sloughing along the edges of the flaps, there was no local inflammatory reaction.

On the morning of Oct. 29th, shortly after the stump had been dressed, the gauze and bandage were found to be saturated with blood. On exposing the extremity of the

stump no bleeding point could be seen, and no indications were manifested of any collection of blood between the flaps.

The subsequent progress of the case was apparently favourable up to the evening of Nov. 16th, when the dressings were found to be stained with blood. Early on the following morning, after renewal of the hæmorrhage, the posterior portion of the extremity of the stump was found to be distended by a large and distinctly pulsating tumour. The edges of the flaps were at this date quite united, save at the outer angle, where there was a small and long sinus, which led to a patch of necrosed bone at the extremity of the fragment of tibia.

The patient having been placed under the influence of ether, the flaps were separated at the extremity of the stump by the knife, and dissected back as far as the knee-joint. The extremities of the leg-bones, together with the soft parts immediately surrounding these, and a considerable portion of the thickness of the posterior flap, were then removed, and the old skin-flaps were brought together over the lower extremity of the femur, the patella being left *in situ*. Considerable difficulty was experienced in securing the popliteal artery, the coats of which were soft and thickened.

In the posterior flap was found an oval sac, of about the size of a pigeon's egg, with a well-marked membranous wall, which was perforated at the outer surface. Opening into this sac, which was filled by coagulated blood, was seen the patent orifice of the stump of the popliteal artery.

The patient progressed favourably after the second operation, and on Dec. 26th was able to get up. At the end of the month the stump was sound and healthy, and firm manual pressure could be applied to its extremity without exciting any pain. The patella remained fixed in front of the condyles, and there seemed to be no tendency in the posterior flap to retract to such extent as to draw this bone over the lower extremity of the femur.

RADCLIFFE INFIRMARY, OXFORD.

CASES OF ACUTE PERIOSTEAL ABSCESS, FOLLOWED BY PYÆMIA, WITH SECONDARY DEPOSITS; DEATH.

(Under the care of Dr. GRAY.)

Acute periosteal abscess connected with one iliac bone; symptoms of septicæmia; gangrene of portion of hands and feet; death; autopsy; secondary deposits in lungs and various systemic organs.—Walter F——, aged seventeen, a tailor's apprentice, was sent to the infirmary May 2nd, 1877, as a case of rheumatism. There was a history of good health up to a fortnight before admission. He then got wet through, and let his clothes dry on him, but felt no ill effect till four days afterwards, when he began to have pain about the back of right hip. Three days before admission he had a rigor, vomiting, and great increase of the local pain. On May 3rd he had dry tongue, rapid weak pulse, and morning temperature of 104°. The right lumbo-sacral region was very tender, full, and tense, but not fluctuating. Deep-seated suppuration being diagnosed, he was transferred to the care of the surgeon. He became gradually worse, with high temperature, one or more daily rigors, profuse sweating, and diarrhœa, till May 12th, when he died. Meanwhile the pus had come no nearer to the surface, and the attempts to reach it had been unsuccessful. The last five or six days before death successive patches of dark discoloration appeared on the soles of the feet. The skin over these patches first reddened, then its epidermis became raised by bloody serum. At the same time the lad complained of shooting pains down both arms, and all the finger-tips but one became gangrenous. The left knee became a little distended with fluid, without any redness of skin. Also, just above the left eyebrow, a patch of skin, about the size of a florin, became raised, puffy, and beset with numerous small vesico-pustules. No murmur was at any time heard at the heart, nor did any cerebral or pulmonary symptoms manifest themselves.

The *necropsy* showed entire gangrene of the last phalanx of each finger but one, and two or three gangrenous patches on the sole of each foot, the toes being unaffected. The effusion in the one knee-joint proved to be only serous. Very deep under the right gluteal muscles was a collection of pus laying bare a considerable portion of the dorsum ilii, involving the sacro-iliac articulation, and burrowing through the sciatic notch, behind the peritoneum, up the inside of the corresponding half of the pelvis as high as the brim. The right internal iliac vein and some of its branches were filled with pale-brown adherent clots.

The surface and substance of both lungs were beset with numerous ecchymoses of all sizes, each having a nucleus of firm pale fibrine. Most of the smallest visible branches of the pulmonary artery were plugged with fibrine. The right side of heart contained, besides an ordinary venous clot, an elongated mass of firm pale-brown fibrine made up of numerous very small separate bits. On the left side, besides much interstitial thickening of the free edge of the mitral valve, there were on its auricular surface two or three loosely adherent masses of fibrine. Numerous small buff-coloured spots on surface of liver and a few in its substance. Large fibrinous blocks in spleen and both kidneys. Several large patches of ecchymosis in mucous membrane of stomach, and smaller ones, with a central white nucleus to each, throughout whole length of intestinal canal. The brain, unfortunately, could not be examined.

Acute periosteal abscess over tibia; cerebral symptoms for two days before death; autopsy; pericarditis; secondary deposits in substance of heart, lungs, brain, and other organs.—Thomas B——, aged six years, was sent to the infirmary Jan. 22nd, 1879, as a case of rheumatism. He was too ill to give an account of himself. All that could be learned from his friends about his previous history was that a fortnight before admission he began to complain of pain below one knee, causing him to limp. This was attributed to frequent falls while skating. A week later he took to bed, feeling feverish and ill, and after two or three days' slight amendment got gradually worse.

On examination a soft fluctuating swelling without redness was found over the middle of the left tibia. This was immediately opened, and gave exit to a considerable quantity of pus. The bone beneath was laid bare for some distance; there was no swelling of the leg. He was only semi-conscious; irritable if disturbed; frequently crying out as if in pain; face pinched and shrunken; right corner of mouth somewhat dropped; lips and teeth covered with sordes; tongue dry and brown. Heart-sounds very faint, but no murmur audible. Over front of chest respiratory sounds normal. He was too ill to permit of being auscultated behind. Breathing not quickened.

Jan. 23rd.—Restless and noisy all night. Pupils equal. No vomiting. Every few minutes he cried out, and the whole body then became for a few moments slightly stiffened. Urine passed unconsciously. Radial pulse imperceptible. In the evening he died.

Necropsy.—Body much wasted. Lungs presented patches, some apoplectic, some congestive, some pneumonic, and were posteriorly adherent to the costal pleura by recent lymph. Substance of the lower margin of the left lung beset with numerous buff-coloured deposits—some firm, but the majority in various stages of softening, and with dirty-brown puriform contents. Pericardium generally adherent to the heart by a thick layer of recent lymph, except at one spot, where the lymph had softened down into a puriform fluid. Several branches of the pulmonary artery, as far as they could be traced, were filled with brown clot. Semi-lunar valves healthy. Along the auricular edge of the mitral valve was a line of small, pink, bead-like processes. At three or four places in the wall of the left ventricle were small buff-coloured spots like those at the base of the left lung. One of these at the apex was firm; two others, just below the aortic valves, immediately under the endocardium, were softened down into small abscesses. Each abscess was sealed, and thus prevented from discharging its contents into the blood-stream by a lid of fibrine over the spot where the endocardium had ulcerated through. Liver normal. Spleen small and firm.—Kidneys: Cortices normal, but appearance of pyramids remarkable, each one seeming as if composed mainly of a bundle of pale-brown straight threads, which could be easily scraped off, and were evidently fibrinous threads blocking the vasa recta.—Brain: Veins of pia mater generally engorged. A plug of fibrine filled the cut end of the right internal carotid, and extended a little way into the middle cerebral artery. Blocks were also found in other portions of the circle of Willis. The inner surface of the frontal lobes and portions of the substance of the middle lobes seemed somewhat softened, but their real consistence was felt to be doubtful owing to the surrounding atmosphere at the time being nearly at freezing point. There was no collection of matter in any part of the brain.

GLASGOW ROYAL INFIRMARY.

MITRAL AND TRICUSPID STENOSIS; HISTORY OF ACUTE RHEUMATIC FEVER TEN YEARS PREVIOUSLY, AND FOUR PREGNANCIES; DEATH.

(Under the care of Dr. M. CHARTERIS.)

FOR the following notes we are indebted to Mr. N. A. Talpade, L.F.P.S.G. and L.R.C.P.E., assistant-physician.

M. L——, a married woman aged thirty-five, was admitted on March 19th last. The history of the case showed that the patient had had acute rheumatic fever ten years previously, when she was told the heart was implicated. Subsequent to this she married, and became the mother of four children, all of whom were at the time of admission strong and healthy. Her labours were easy. During her married life she had twinges of rheumatism and some sharp pains about the region of the heart, but with these exceptions and occasional cough and breathlessness she stated that she had been as strong and well as any other "Cumberland lass." About seven months before admission, and two years after her last pregnancy, she observed her legs were swollen, and that the swelling gradually extended upwards until it involved also the abdomen and the face. During this time she also suffered from repeated attacks of dyspnœa, occasional hæmoptysis, and palpitation or "thumping of the heart."

On admission she was anæmic and anxious, unable to lie down with ease, and her breathing was quick—52 per minute. The face, abdomen, and legs were swollen to a considerable extent, the urine was pale (sp. gr. 1018), and contained albumen, but no tube-casts. The most noteworthy symptoms in connexion with the circulatory system were these:—1st. A distinct purring thrill, communicated to the hand placed over the heart, and preceding the apex beat. 2. The apex beat was at the fourth intercostal space. 3. By the stethoscope a murmur was detected running up to the first sound and apparently stopping when that sound was produced. This murmur was heard loudest at the apex, it was scarcely audible either in the axilla or at the inferior angle of the scapula. 4. The murmur was also heard at the lower part of the sternum, in the area of the tricuspid murmur, but there was no fulness or back wave seen in the vessels of the neck.

The patient was in the hospital for about a month. During this period there was no improvement in her condition. The dyspnœa was somewhat relieved by sulphuric ether; other drugs given for a similar purpose seemed inefficacious, and the patient gradually became weaker.

About four days before death she had an attack of hæmoptysis, which continued for two days unchecked by medicines. She was delirious during the last two days of her life, her end being finally very sudden, for while attempting to sit up in bed she fell back and died.

During the time she was in the hospital the most prominent features were—(1) dyspnœa, (2) hæmoptysis, (3) delirium, (4) sudden death.

The result of the *necropsy* was as follows. The pleural, pericardial, and peritoneal sacs were filled with serous fluid. The heart weighed thirteen ounces; the mitral orifice admitted *only one finger*, so also the tricuspid; the mitral valve was thickened, its segments were united, and there were warty vegetations on the auricular surface. The tricuspid valve was also thickened and united into an oval ring, and had a few warty vegetations on its auricular surface; the left auricle was dilated and the walls thickened, and a similar condition of matters was observed on the right auricle; there were vegetations on the aortic valve also, and its segments were thickened. The lungs contained eight or nine triangular dark red masses with the base to the surface; into one of them a vessel was seen to enter full of solid red clot; the rest of the lung-tissue was normal.

GENERAL HOSPITAL, NOTTINGHAM.

EPITHELIOMA OF PHARYNX AND ŒSOPHAGUS; GASTROSTOMY; DEATH NINE DAYS AFTER.

(Under the care of Mr. LITTLEWOOD.)

THE following case, for the notes of which we are indebted to Mr. A. R. Anderson and Mr. W. J. Cant, will be found to differ in many important particulars from that recorded in the "Mirror" last week from the Coventry and Warwickshire Hospital. The chief points of difference as regards the earlier history and symptoms of the case may be stated under the following heads:—Sex, duration of symptoms, alleged seat of pain, site of obstruction as indicated by bougie. As regards the operation, after-treatment, progress of the case, termination and pathological conditions, differences appear in the time of the first stomach-feeding, in cough, local pain, date and apparent cause of death, actual situation and nature of the morbid growth, secondary deposits, and, lastly, in the pleuritic and peritonitic implications. We cannot afford to overlook any of these factors, if we would arrive at a tenable conclusion respecting the nature and value of the operation of gastrostomy.

Hannah D——, aged forty-nine, was admitted on April 15th last. She said that for a year past she had had difficulty in swallowing, and pain over the lower part of the neck; that four months before her admission she ceased to be able to swallow solids, and since that time had spat up "phlegm" streaked with blood; and, also, that during the three days which preceded her admission she had not swallowed even fluid food.

She was extremely emaciated, having rapidly lost flesh up to the time of her admission. Muco-pus, tinged with blood, was frequently spat up. She was quite unable to swallow even a teaspoonful of milk, this coming back into the mouth after many ineffectual attempts to get it down. Efforts were made to pass a small bougie into the œsophagus, but without success, the instrument being stopped about the level of the cricoid cartilage, at which spot a very distinct thickening could be felt externally. She complained of hunger, and a sinking feeling referred to the epigastrium, but did not suffer much from thirst; was troubled with a slight cough. Enemata of milk-and-egg, beef-tea, &c., were given every four hours.

On April 21st a consultation was held, and it was decided that gastrostomy should be performed. It was explained to the woman that this measure was only a palliative one in her case; she, however, expressed herself as being quite willing to have an operation performed which would give her even temporary relief. Chloroform was then administered, and Mr. Littlewood proceeded to operate. A slightly curved incision was made, about three inches long, rather more than an inch below the costal cartilages, commencing on the left side of the mesial line and extending outwards from that point. On opening the peritoneum, the left lobe of the liver could be seen at the upper border of the wound, and on passing the finger backwards the stomach was at once reached and drawn forwards. A couple of needles, threaded with a double whipcord ligature, were then passed through the edges of the wound and the walls of the viscus, one near either end. The stomach was opened, the ligatures were divided, and the quill suture used for fixing it to the wound. A few horsehair sutures were introduced at different points.

The same evening the patient had rallied well from the effects of the anæsthetic, and was quite comfortable after one-eighth of a grain of morphia given subcutaneously. The slight oozing following the operation had ceased. She was fed by enemata. She passed a good night, and next morning looked cheerful. There was a little pain round the wound when she coughed. An ounce of beef-tea was injected through the wound at mid-day, most of which came back.

On the 23rd, she was quite comfortable. The wound was quiet, and the edges were apparently uniting to abdominal wall. An ounce of egg and milk was injected into the stomach at 11 A.M., and again at 3 and 7 P.M.; all were retained.

On the 24th, the condition was somewhat improved. She fed by the stomach three times during the twenty-four hours. The following night she was troubled with cough, which caused much pain round the wound. The stomach was very irritable. Several attempts were made on the 25th to inject small quantities of milk, but it was not retained. One-sixth of a grain of morphia was given towards evening. The pain round the wound was relieved by the morphia, but had increased towards morning of the 26th. A quantity of greenish viscid fluid came through the wound. Attempts to inject food failed, as it regurgitated immediately. The morphia injection was repeated with benefit.

On the 27th she had not so much pain. Several small injections were retained.

On the 28th she was not so cheerful, and had occasional attacks of coughing, which gave her much trouble, and caused dragging pains round the wound. One of the quill sutures was taken out.

On the 29th there was more pain in the abdomen; anxious expression; no tenderness, however, on pressure, except near the wound. The other suture was taken out. She was fed by the stomach four times with milk and beef-tea (half an ounce). Three of the injections were retained.

On the 30th she was evidently sinking; no fluid was retained by the stomach, and she died at 2.30 P.M.

The *necropsy* showed a cancerous growth (epithelioma) involving the lower part of the pharynx and the first inch of the œsophagus. The stomach had united to the abdominal wall except at one point. There was marked evidence of peritonitis.

Reviews and Notices of Books.

A Text-book of Operative Surgery and Surgical Anatomy. By CLAUDE BERNARD and CH. HUETTE. Illustrated by 88 Plates, drawn from nature and engraved on steel. Translated from the French and edited by A. T. NORTON, F.R.C.S., Surgeon to St. Mary's Hospital. London: Baillière, Tindall, and Cox. 1878.

A Manual of Operative Surgery. By LEWIS A. STIMSON, B.A., M.D., Surgeon to the Presbyterian Hospital, &c., New York. London: H. K. Lewis. 1878.

THE first difficulty that meets the author of a book on operative surgery is to determine the minuteness of detail with which he will describe operations, and if, as is the case in the volumes before us, he attempts to compile a complete systematic work, the question is of great consequence. To enter minutely into every detail of each method involves not only great labour in the preparation, but also taxes the diligence of the reader. Bernard and Stimson have both preferred to avoid this, writing brief descriptions of operations, and the result in each case is therefore not quite satisfactory. The great feature of Bernard and Huette's book is the steel engravings, which are very numerous, and illustrate the text most thoroughly; they are beautifully executed and very truthful. We notice two or three inaccuracies which have been allowed to creep in: thus, the figures to illustrate the ligature of the third part of the *axillary* artery show, the one a dissection of, and the other the mode of exposing, the *brachial* artery; the figure of excision of the knee shows about twice the proper length of femur being removed; and in two figures of division of the internal rectus for strabismus, the eyeball is represented as being strongly *everted* while traction is being made upon the tendon to be divided. But these are exceptions, and we have alluded to them in the hope that they may be corrected, and not at all as specimens. A description of the anatomy of each part precedes the directions for operating upon it, and it is brief without omitting important matter. The operations are not, however, so carefully described as they should be, and one looks in vain for many of those numerous little details which are all-important for the success of every operation. The book reads rather like the work of a school-man than the outcome of the experience of a skilful and practised operator. We must take exception to the method advised for the ligature of an artery in its continuity; for the greatest care should be exercised to disturb it in its sheath as little as possible, and nothing like a director ought to be forced beneath it. We find no mention of any operation for ligature of the external or internal carotid artery or the aorta. The editor professes to have brought the work up to date, and not to have contented himself with merely translating the original. But among other omissions we find no mention of Esmarch's bandage, Davy's operation for talipes, and osteotomy; and the directions for the excision of the knee and the upper jaw, and for amputation of the shoulder and hip, are both meagre and faulty. It also wants an index.

Stimson's manual is also freely illustrated, but with wood engravings, several of which are mere outlines; they are correct and very serviceable. Surgical anatomy is only dealt with incidentally. As an attempt has been made to describe many methods of operating, and not alone those which the author thinks most desirable, the descriptions have been made brief, and we miss some few important details, such as the particular part of the carotid sheath to open in the operation for ligature of that artery. We are rather surprised to find that a very simple expedient for expediting the introduction of the tube in tracheotomy is not noticed. It is to fix the trachea by a sharp hook entered to the right of the middle line, and at the upper end of the intended incision; the trachea is drawn up and fixed by this in the usual way, while its rings are being cut through, and then as the hook is on one side, the right lip of the tracheal wound is easily everted by it, and the tube readily passed in; it is at once the simplest and surest way of doing what oftentimes gives trouble. The descriptions are thoroughly practical, and the subsidiary points of the exact position of the patient, the duties of assistants, and so forth, receive their due attention, and we are sure the work will be useful and well received here. The one thing that is impressed upon us most by reading it is that it is too much of a systematic work. No doubt the author has aimed at making it such, but we cannot help wishing that he had indicated more fully his own preferences; the descriptions would then have been marked with that minuteness of detail which the author would have felt necessary to insist upon, that his readers might by their own successes be able to acknowledge him as a faithful guide.

OUR LIBRARY TABLE.

Transactions of the Pathological Society of Philadelphia. Edited by J. HENRY C. SIMS, M.D. Vol. 8. Philadelphia. 1879.—This volume, embracing the proceedings of the Society for the session 1877–8, contains many interesting and some novel facts in pathology. A good record of a case of "chronic hepatitis with enlargement" is given by Dr. John Guitteras. The patient had previously been exposed to malaria, and it was a question how far this determined the hepatic condition. The liver weighed five pounds three ounces, and, as jaundice was a marked feature throughout, the condition presented seems to fall under the head of "hypertrophic or biliary cirrhosis." Dr. O'Hara records a case of successful excision of four inches of the upper part of the rectum in consequence of intussusception caused by a villous tumour. Most of the members discussing the case thought it should be styled prolapse of rectum rather than intussusception. There is also an interesting record of a case of diabetes, with "fatty diarrhœa," when after death the pancreas, which was extremely atrophied, was found to be the seat of a cyst, and its duct to be strictured. A case of syphilitic disease of the pleura and lung is recorded by Dr. Warder. A long and exhaustive review of the opinions of different writers upon puerperal eclampsia is given in a paper by Dr. Jas. Tyson, who quotes, first, those writers who believe that the eclampsia is due to Bright's disease, and, secondly, those who dispute this view, himself concluding in favour of the former opinion. Some of the debates following upon the communications appear to have been very exhaustive, and are fully reported in the volume. One of the most interesting took place on the subject of "embolic pneumonia," arising out of a case contributed by Dr. Shakespeare.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-first Annual Session. Baltimore. 1879.—The Society, of which we have here the

annual Transactions, must be one of the oldest English-speaking medical congresses in existence, having held its first annual meeting two years before the beginning of the present century. The chief feature of the volume before us is undoubtedly the address delivered at the opening of the session by Professor Newell Martin, of Baltimore. Dr. Martin was, a short time ago, assistant to Professor Michael Foster, at Cambridge; and he left this country to take up the duties of professor in physiology at the University of Baltimore. The subject of his address was Secretion, and in it he has managed to convey in a very clear and comprehensive way the present state of knowledge upon this important subject. Amongst the papers and reports in the volume is an interesting one on yellow fever, by Dr. Evans, of Baltimore, in which he speaks very doubtfully as to remedial measures, but strongly urges increased attention to prophylaxis by improved sanitation. The treatment of the insane and the subject of dipsomania still continue to excite much attention in the States. They form the subject of two memoirs in the section of Psychology in this Society. The proceedings are not very exhaustive, but they give evidence of honest work.

L'Année Médicale 1878. Paris: E. Plon et Cie.—We need only direct attention to this publication, which is a new venture, one more added to the list of year-books, launched under the auspices of the indefatigable M. de Bourneville. It strikes us as a very concise and fair summary of the work done in the various departments of medical science during the year 1878. A considerable amount of space is devoted to medicine, and the compilers in many instances have felt it incumbent on them to travel beyond the bare record of the year's work, and to give more or less complete sketches of the previous history of the subject. This, no doubt, adds to the pleasure of reading these essays, which are mostly written clearly and with discrimination. The volume is, further, of convenient size, and may often be profitably consulted by those who have neither the time nor the opportunity for searching through the journals of the period.

INTERNATIONAL MEDICAL CONGRESS AT AMSTERDAM.

THE following is a brief summary of some of the more important papers read before the Amsterdam Congress, in addition to those given in our last issue.

A paper read by M. Otto Becker, of Heidelberg, on Diseases of the Eye in relation to Cerebral Localisation, did not, as M. Bouchut stated, throw much new light on the subject; but was characterised chiefly by the attempt to draw the distinction between the significance of the "choked disc" and descending optic neuritis. The author also stated that the extent of the visual field was of value in determining between a primary optic atrophy (where this was double and not due to papillitis or neuritis) associated with locomotor ataxy and other affections leading to amaurosis. Hemiopia, especially lateral homonymous hemiopia, is of cerebral origin, and serves as a diagnostic point, even if papillary atrophy be slight or absent.

M. Verneuil spoke on his favourite topic—the Indications and Contra-indications for Operations in the subjects of Constitutional Disease. His propositions were—1st. Surgical operations are not positively contra-indicated in subjects attacked with constitutional disease, but they were often permissible, frequently useful, and occasionally indispensable. 2nd. Their prognosis is always much more serious than in healthy subjects. 3rd. Their prognosis varies in the first place according to the differences in constitutional disease, and for each of them considered separately, according as the diathesis belongs to a dyscrasic state or as it is induced by lesions anatomically and chemically appreciable. 4th. Special medical treatment directed to the constitutional disease should be entered on during, after, or, if possible, before the surgical operation. 5th. A knowledge of the pathogeny, pathology, and the natural evolution and termination of constitutional diseases—not perhaps sufficiently possessed by surgeons—is of great importance. It serves to deter more than to incite to surgical measures, and increases confidence in the remedial efforts of nature seconded by a comparatively mild therapeusis. 6th. Operations on such patients, although more generally palliative than curative, are nevertheless of great utility. In extreme cases they may prolong life, render it less painful, and for the patient at least they open the door of hope.

A paper was read by Dr. Drysdale upon the Regulation of Prostitution and the Public Health.

Mr. Marcowitz (of Bucharest) communicated the results of his observation on the Treatment of Abdominal and Petechial Typhus by the Douche, which he contrasted favourably as regards its anti-pyrexial effects with the cold bath. He believed that the shock of the douche was useful, that it acted in a reflex manner on the heat-regulating centres, upon which it seemed to have a stimulating effect, thereby continuing the good already obtained by the subtraction of heat. The only contra-indications to its use were those insisted on by Liebermeister as to the cold bath—viz., intestinal hæmorrhage, and a high degree of cardiac failure, as indicated by a small and feeble pulse. Pulmonary engorgement, save when it is due to cardiac weakness, is regarded as an indication for this measure rather than the contrary.

Amongst the other communications read was one by Professor Virchow upon Medical Education. He urged the methodical classification of the different branches of medical science, so that the student should pass successively from the accessory sciences—anatomy, physiology, psychology—to the study of pathology and clinical medicine. As to books, it was to be desired, he said, that the pupil should have with him concise treatises, exactly summarising the state of science in each department of medical instruction, so that he may not be constrained to lose precious time in reading through long-winded books and monographs.

In the special Medical section, under the presidency of Professor Rosenstein, a case of Tracheo-bronchial Adenopathy was read by M. Guiraud; and Professor Eulenberg, of Greifswald, made an interesting communication upon the Transference of Sensibility.

New Invention.

PROTECTIVE VENTILATORS.

WE have within the last few weeks received from Mr. Bracker, of the Ventilator Company, New York, specimens of a ventilating apparatus for rooms in which ordinary windows exist. It consists of a simple hinged frame, covered by some fibrous material, the upper part of which is fixed into the uppermost three or four inches of the window, whilst the lower portion is inserted at the bottom; the former acting as an up-cast and exit, and the latter as an in-cast. The plan is, in fact, very similar in principle to the ordinary sash ventilation proposed by Mr. Tobin and others some years ago. But the apparatus now described is more complicated, and it is claimed for this particular invention that the in-coming air can be disinfected (or at all events deodorised) and rendered entirely free from dust and other impurities.

INSANITARY STATE OF LIMERICK.—At a recent meeting of the Limerick Corporation, a communication was received from the Local Government Board, which stated that, without a disinfecting chamber, the sanitary authorities could not discharge their duties under Sections 137 and 139 of the Public Health Act, and adding that the erection of one should be no longer neglected. The guardians, however, refuse to incur the cost at present, and so the matter stands.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 27, 1879.

THE military authorities are, it is believed, at last alive to the necessity of doing something to alter the existing unhappy condition of the Medical Department of the Army, and the long-delayed new Warrant will, we hope, very soon see the light. Hitherto a Warrant which increases pay and improves pension has been regarded by Secretaries of State as a universal panacea for all grievances—and no doubt the financial lever is a powerful one; still there are other evils which have long rankled in the minds of army surgeons, and which, if now left unredressed, will prevent any mere money increase being followed by that contentment in the Department and that influx of future candidates of a high class which a large outlay of public money should command. These grievances, some real, a few, perhaps, quasi-sentimental, have been freely ventilated in our columns, and we trust the new regulations will remove all the more important ones. There is, however, one complaint which has lately been brought very prominently to our notice, and which we hope Colonel STANLEY will see the necessity as well as the justice of redressing. Medical officers complain bitterly of the paucity of honours and rewards meted out to them for their service in war. From South Africa and Afghanistan the cry is the same. It is, we fear, a true one. We have watched with keen interest the part the Medical Department has played in these two campaigns, and what do we find? On the one side a devotion to duty almost heroic, incessant work, ceaseless anxiety, privations, sickness, wounds, even death; on the other, thanks so sparingly given as to be almost valueless, services so grudgingly recognised that the recognition is of little worth. We do not forget our gallant dead, we still mourn our fallen brethren, and recall with pride the names of heroic SHEPHERD killed at Isandula while succouring a wounded soldier; of COBBIN, who fell at Intombi; of BRICE and others who have lost their lives in their country's service; while the sad end of AMBROSE KELLY, who has perished with the Cabul Embassy, adds one more victim to the death-roll; but in addition to those whose deaths are tinged with the glory of the battle-field, there are many whose end, less tragic, is yet not less worthy of record. In Zululand disease has laid low medical equally with military officers; in Afghanistan the losses of the Medical Service have been out of all proportion to their so-called "combatant" brethren. Cholera, which has made such havoc with our troops, has numbered among its victims no less than *ten* military surgeons. When the history of the Afghan war comes to be written, no page will be more replete with suffering and self-denying heroism than the description of the return march from Jellalabad, graphically termed the "march of death." Worn with anxiety, overwork, and intense heat, the medical officers struggled on, refusing to give in, several paying the penalty with their lives. It is unnecessary to show further how arduous have been the labours of the Medical Services in these wars, how difficult the task of providing the medical requirements. The campaigns were entered on short-handed, the system was new and untried, the country difficult, transport scarce; but there was no breakdown—energy, tact, and perseverance overcame all obstacles. What has been the recognition? How have the exertions of medical officers been rewarded? With the exception of one C.B., given to an officer of previous distinguished war service, not a single promotion, honour, or decoration has been bestowed on the Medical Department; Knighthoods and Orders have been liberally conferred on the Commanders-in-chief, Generals, and Colonels, while the heads of the Medical Services, the officers responsible for the whole medical arrangements of the campaign, are left out in the cold, the Principal Medical Officers of Divisions and many others who have done such excellent service are alike unrewarded. In India the Viceroy in Council tenders his thanks to the troops engaged in the late Afghan war, he is profuse in his congratulations and eulogies to all but the medical service, whom in a few cold words of thanks he couples with the "telegraph and postal departments." These slights and evidences of want of appreciation have caused much natural indignation amongst our military brethren. We do not know who is responsible for them, but we do know that they will exercise a very injurious influence on the profession at large, and through them on the schools and intending candidates for army surgeoncies. We trust the Secretary of State for War will give his earnest attention to the subject, and insist on a due share of honours being apportioned to medical officers who, on active service, have deserved so well of their country. The termination of the Zulu war will, we conclude, be marked by a *Gazette* conferring Her Majesty's gracious appreciation of the services of her soldiers, and we cannot but indulge a hope that the opportunity will be taken of bestowing a proportion of the rewards on officers of the Medical Department.

THE Report of the two Commissioners, Surgeon-Major COLVILL and Dr. J. F. PAYNE, appointed by the Privy Council, in consultation with the Royal College of Physicians, to investigate, on the spot, the late outbreak of plague in the province of Astrakhan, and which has recently been presented to the Lord President, is, as was to be anticipated, a paper of curious interest. The interest is certainly of a mixed nature, and it is no fault of the Commissioners if it relates rather to what is wanting than what is contained in the report. Indeed, having regard to the circumstances under which they were appointed, and the period of their appointment, we have to congratulate them on being able to bring back, as they have done, from their distant mission, any substantial addition to our knowledge of its subject. The report consists of two despatches addressed to the Lord President from the plague-infected district, and of a general statement of the results of the Commissioners' investigations. An excellent map of the infected district is added. Throughout the pages of the report, the picture is suggested, in regard to the Commissioners, of good men struggling with unmerited adversities, and yielding so much to the depressing influence of an anomalous, if not false, position (aided, perhaps, in the end

by malarious sickness), that a disposition is manifested to underrate the actual gains of the mission.

The Commissioners left England on the 11th of March of the present year, when it was known everywhere, except apparently in Whitehall and Pall-mall, that plague had virtually ceased on the Volga. The last-recorded death on the right bank of the river—the principal seat of prevalence—had occurred on Jan. 12th; on the left bank on Feb. 14th. The Commissioners reached Tsaritzyn, on the Lower Volga, at the close of March, and their first official dispatch is dated thence the 1st of April. On the way to their destination they had picked up what information they could gather as to the rumoured presence of a modified form of plague in St. Petersburg, but obtained nothing that had not been previously well-known. Of their position as to gaining information in the infected area, they themselves thus speak: "Two other important subjects [in addition to quarantine] were mentioned in our instructions—namely, the nature of plague, its characters during life, and its morbid anatomy; and in the second place, the mode of spread of the disease, with special reference to personal communication, and to local causes. With respect to the clinical characters and morbid anatomy of the plague, as we have had no opportunity on this occasion of observing the disease, either during life or after death, we have no direct information to give. The same is true with regard to the immediate propagation of the disease, whether by personal intercourse, contagion, infection, or otherwise." Nevertheless the Commissioners collected what information they could on these matters, but were checkmated in prosecuting a detailed inquiry by the facts that the greater number of the medical commissioners who had been earlier on the spot, Russian and other, had left before their arrival; that the more important of the data in the possession of the Russian authorities had been forwarded to St. Petersburg, and could not be placed at their command until published by the Imperial Government, and that they were unable to see the only living Russian physician who had witnessed the outbreak. It is to be inferred, moreover, that our Commissioners were at a disadvantage in making their inquiries in not having had communicated to them, before leaving England, the reports and communications made public from time to time of the progress of the outbreak on the Volga. These reports were reprinted in probably every journal published in Europe, and carefully prepared abstracts appeared in our own columns. How meagre and imperfect the information must have been gained on the spot, is shown by the fact that the report does not contain any reference to the only account existing of an eye-witness of the outbreak at Vetlianka, the report of Dr. DÖPPNER, the principal medical officer of the Cossack troops in the province of Astrakhan, published in January last, and reprinted in our own columns! Indeed, there can be no question that the Russian authorities withheld largely information from the Commissioners, and this probably for the reason that it would be assumed they would have in their possession the already published official accounts. The information gathered by the Commissioners falls considerably short of that already published in our columns and those of other British journals, professional and general; but to the extent to which it goes it confirms the accuracy of the previously-published data. As to quarantine, the observations are deprived of most of their value by the absence of the precise dates of the establishment of the measure around the several villages submitted to it, and generally with respect to the cordons placed around the infected district; and with respect to the isolation of plague-stricken houses, there is a curious and almost inexplicable absence of any reference to the shocking barbarities which accompanied the measure. Subject to these considerations, however, the general account of the outbreak gathered by the Commissioners will be read with interest. Both were convinced that the disease constituting the outbreak was true Levantine plague.

The chief importance of the report rests, we should say, in the descriptions by the Commissioners of the localities which had been plague-stricken, and especially of the bed of the Volga within the district. These descriptions are vivid, and represent the communities living there in states of well-being and comfort, which had, perhaps, not before been accurately apprehended at a distance; although it is obvious that before the cleansing enforced upon the people in consequence of the outbreak of plague the hygienic condition of the several places must have been appalling. But in writing of the marshy islands which in this part of the Volga largely occupy the bed of the river, the Commissioners say: "It is difficult to believe that we were not on corresponding ground in Mesopotamia." The comparison thus suggested from Surgeon-Major COLVILL'S experience is new to us, and it naturally suggests to the Commissioners that the local causes contributing to the development of plague on the Lower Volga were similar to those which had proved operative to the same end in Mesopotamia. The investigations of the Commissioners into a probable introduction of plague to Vetlianka from Resht or from Armenia, so far as they were capable of being pushed, were unfavourable to such theory. Here, however, it must be observed that the information derived by the Commissioners on the spot as to Resht appears to have been singularly imperfect and misleading. They were left in the dark as to the true facts of reported plague in Astrakhan in the same year, and at more than one spot on the eastern coast of the Caspian within Russian territory. Until these facts are worked out the question of carriage of the disease from Persia to the banks of the Volga must at least be left in abeyance. The Commissioners are disposed to conclude (in this respect, agreeing with Dr. THOLOZAN) that the disease originated in the district of its prevalence, but Dr. PAYNE expresses this opinion in a much more qualified manner than Mr. COLVILL.

Although the report helps little towards the solution of the several great practical and scientific questions which have arisen in connexion with the late outbreak of plague on the Volga, nevertheless we are far from unthankful even for that little. But it provokes indignation to think that the two Commissioners should have been despatched to the other end of Europe on a dangerous duty, one of them at least subjected to serious illness, and the objects of a costly mission largely frustrated, from negligence for which the Royal College of Physicians must be held in the main responsible. It is clear that the Commissioners were sent on their complex errand without any sufficient instructions, and without any knowledge of existing data on its subject for their guidance, and this at a time when such data were

absolutely essential to a successful prosecution of the mission. When the Royal College of Physicians undertook to advise the Lord President on the subject it undertook the responsibility of the medical elements of the mission, and, as should have been foreseen in Whitehall, an abortive inquiry is the result. We hope that in future the Government will bear in mind that even the hereditary respectability of the College in Pall-mall does not save it from the lot of common mortals when, as in the present case, it undertakes functions for which it is unfitted.

A REPRINT of the several memoirs read before the Royal Society of Edinburgh, by Professor RUTHERFORD, gives us in a collected form the results of his long-continued and carefully-conducted researches on the physiological actions of drugs on the secretion of bile. There is perhaps no organ of the body the affections of which are spoken of with greater confidence and treated with more rashness than those of the liver, whilst at the same time there is none as to which our ignorance of the circumstances which modify its functional activity, and of the physiological action of its secretion, is more profound. It is not uncommon to hear even members of the profession account for headache or depression of spirits, or some temporary impairment of vision or of hearing, by the statement that their liver is out of order, or that they are suffering from an attack of the liver, without being able to give any intelligible explanation of the expressions they have used; whilst remedies of all kinds, on the strength of their purgative action, have been and still are administered, with the view of unloading the liver, with but little evidence in support of their supposed influence. As Professor RUTHERFORD observes, the physician has had no difficulty in determining when a substance excites the sweat-glands, the salivary glands, or the kidneys, but as regards the liver, he has been so much embarrassed that although substances supposed to increase the discharge of bile—the so-called cholagogues—have been administered to man for over two thousand years, there has always been much uncertainty as to those which are really to be regarded as cholagogues, and even in the case of any agent which increases the discharge of bile, it has been quite uncertain whether this effect is due to a stimulation of the bile-secreting or of the bile-expelling mechanism.

Thanks to the labours of KIERNAN, and a host of microscopical observers since his time, the anatomical arrangements of the very complex structure of the liver are now fairly understood, though there are still some disputed points, especially in regard to the precise mode of origin of the biliary ducts. Our knowledge, again, of the characters of the bile, the chief and most obvious result of the functional activity of the gland, is tolerably accurate; though if we turn to any of the works on physiology it will be seen that, whilst it is believed, on account of the place where the secretion is poured into the alimentary tract, to play an important part in the function of digestion, scarcely any satisfactory information has been acquired in respect of its digestive powers. We need hardly remind our readers how inadequate is our knowledge of the glycogenic function of the liver. Glycogen itself has, indeed, been thoroughly investigated, and its composition is accurately known; but its source, the mode of its formation, the amount that is formed, and the uses to which it is applied in the economy, are all obscure and unsettled points of physiology.

But if these difficulties and uncertainties exist in reference to the anatomical and physiological peculiarities of the liver, how much greater are the difficulties and uncertainties tha meet us on every side in studying the action of drugs on the liver. This has been so well argued by Professor RUTHERFORD that we may quote his words: "Admitting that the clinical observer has supplied valuable information regarding the power of various substances to increase the amount of bile in the dejections, the manner in which this result is brought about is in the highest degree uncertain. On the one hand, it might be occasioned by stimulation of the hepatic secreting apparatus, or, on the other, by stimulation of the muscular fibres of the gall-bladder and larger bile-ducts—to wit, the bile-expelling apparatus; or it may be occasioned by removing a catarrhal or congested state of the orifice of the common bile-duct, or of the general extent of the larger bile-ducts, or by removing from the intestine substances which had been passing therefrom into the portal vein, and depressing the action of the hepatic cells; or, lastly, by stimulating the intestinal glands, and thus producing drainage of the portal system, whereby the 'loaded' liver might possibly be relieved. Any one or all of these causes may be in operation, and it can only be repeated that such knowledge as has hitherto been possessed and acted on rests upon a singularly uncertain basis."

Professor RUTHERFORD found the dog to be, on various grounds, the animal by far the best adapted for experiment, especially because the results at which he has arrived are in complete harmony with every perfectly ascertained fact regarding the actions of medicinal agents on the human liver, and prove that the liver of this animal is affected in the same sense, though it may not be in the same degree, by substances that act on the human liver. In almost all instances the animal was fed for the last time in the afternoon, and was then allowed to fast till the following morning, when the stomach was completely empty. The introduction of a small dose of curara prevented irregular muscular movements, and avoided any possible disturbing influence these might have on the activity of the secretion. It was necessary, of course, to maintain artificial respiration. Nearly all the drugs were injected into the duodenum. In a few instances the bile was analysed, but, valuable as the information would have been, if this had been adopted in every instance, it was found to be so laborious that it was unwillingly given up. It is obvious, however, that a knowledge of the composition of the bile secreted under the influence of different drugs would be of still greater value than that of the quantity alone.

The method adopted by RÖHRIG of counting the drops of bile as they were secreted was abandoned for the more satisfactory and less laborious method of allowing the bile to flow into a fine cubic centimetre measure, and recording the quantity secreted every quarter of an hour.

It is impossible even to mention the various drugs which have been made the subject of experiment, and which are at least fifty in number; but one or two may be selected as of general interest, and amongst them Calomel occupies the foremost place. The action of this drug has been very generally regarded as that of a stimulant to the liver, lead-

ing to an increase in the quantity of bile—a view that was founded in part on its purgative action, and in part on the green tint that it frequently confers upon the fæces of children to whom it has been administered. Professor RUTHERFORD'S experiments show clearly that this is incorrect, and that whilst calomel, in doses of ten grains, five grains, or two grains, several times repeated, when placed, without bile, in the duodenum of a fasting dog, produces a purgative effect, varying with the dose, it, so far from increasing the secretion of bile, usually diminishes the secretion, just as when any other substance that is not an hepatic stimulant—e. g., magnesium sulphate—is administered. No difference is observed in the effect even when calomel is mixed with bile and then introduced into the duodenum. Calomel, then, has no power to increase the biliary secretion; but it is worthy of note that mercuric chloride or corrosive sublimate is a powerful hepatic stimulant in the dog, and the question immediately arises whether calomel may not be in part converted into corrosive sublimate by the action of the acid gastric juice. To this question, however, Professor RUTHERFORD is enabled to give a very decided negative answer, and the purgative action of calomel must therefore be attributed to its stimulant action on the glands of the intestine. The important practical application follows, that if it be required both to excite the activity of the intestinal glands and to augment the secretion of bile, calomel, with a small admixture of corrosive sublimate, should be employed. Podophyllin, aloes, colchicum, ipecacuanha, colocynth, dilute nitric acid, sodium benzoate, and salicylate, are amongst the more powerful hepatic stimulants, though they act in various ways; some, like podophyllin, apparently affecting the intestinal glands equally with the liver; others, like ipecacuanha, affecting the liver almost exclusively; and there are many purgatives which owe their drastic power, not to their action on the liver, but to their action on the intestinal glands, as in the case of scammony, Rochelle salt, and manganese sulphate.

We commend Professor RUTHERFORD'S experimental researches to the profession, as constituting the foundation of a rational treatment of hepatic diseases, and feel satisfied that they will be carefully consulted by all who desire to prescribe drugs in these affections which shall fulfil the indications required.

THERE is an aspect of preventive and remedial medicine—more particularly the former—to which we do not perhaps as a profession attach sufficient importance. The campaign against disease is carried on with zeal and intelligence, so far as the professors and practitioners of physic are concerned, but with scarcely more than a single exception the measures of attack and defence are directed against the diseases of adult life. Beyond such general counsel as family "doctors" may be able to give in their occasional visits to the nursery, practically nothing except vaccination is done to protect the young or, looking at the matter from a sanitary standpoint let us say, to arrest the beginnings of those abnormal states and depravities of the "constitution"—to use a conventional term—which in after years bear fruit in the varieties of disease. It is difficult to believe that there is nothing to be done, and eminently unsatisfactory to feel that something of vital importance may possibly be neglected because the health of children, as a class—certainly not an unimportant one, since it constitutes the rising stock of the population,—does not seriously elicit the interest and engage the attention of scientific physicians and reformers. The sufferings and maladies of children form a large part of the subject-matter of every general practitioner's daily thought, but, as yet, beyond, as we have said, the measure adopted to eradicate small-pox, no systematic effort has been made to improve the constitutional health of the people by arresting the morbid processes of constitutional life, or blighting the transmitted germs of disease while they are as yet nascent.

Some thirty years ago there was a prospect that prophylaxis in the young stock would become a topic of scientific consideration. Men of mark in the profession made a show of devoting special attention to the subject. It found a place in prominent courses of lectures, and for a brief moment actually achieved what we fear must be called "popularity" among men of science; but the effort, if such it can be designated, was quickly exhausted and passed away, as such efforts are apt to do, in vain generalities. Most of our readers will, for example, remember one of the latest of the sorry maxims which constituted the sum total of the result of this paroxysm of special care for the young: "Wash them, air them, and iron them!" Whenever a pretentious movement dies an ignoble death, we enshrine its ashes in maxims. Surely there is something to be done or attempted with a view to the extermination of such diseases as cancer, tubercle, gout, and the neuroses, if not in the next, in a proximate generation? It cannot be disguised that this grave question is practically disregarded. Once, now and again, a *savan*, generally a specialist, reminds the profession and the public that these so-called diseases are hereditary, and, therefore, amenable to preventive or destructive treatment; but the practical questions involved are felt to be either too delicate or too complicated for serious and practical investigation. And so the matter is "mentioned" at odd times in the course of years, and meanwhile the lines of constitutional disease are deepened, and the tendency to develop and extend its ravages strengthened. Can nothing be urged to secure the attention of medical scientists for this special question in a more practical shape than has hitherto been given to it? The time has probably arrived when the bare fact that the medical profession had seriously turned its thoughts and was about to concentrate its energies upon the enterprise of grappling with some of the more occult workings of disease in the organisms of children would prepare the public mind for the reception of any counsel it might be found possible to offer in the interests of health. Moreover, it would strengthen the advanced position science has taken in regard to small-pox—the only malady preventive medicine has formally set itself to extirpate in a way which the community is able to appreciate. We say this advisedly, with a full recollection of the manifold benefits which sanitary science has conferred on the people, and the impression we are beginning to hope it will soon be able to make on the total death-rate.

The care of the young is a subject of perennial importance, and one of which the health reformer should never weary, because they are, in a very practical sense, the root of the

national prosperity. Physically, mentally, and morally, the child-state is the foreshadowing, and the growing and determining condition, of the adult state; the child-character is the outline of the mature character; and the child-life is the harbinger and—more, the constructive and formulating phase, of the life of the adult. To some extent this is recognised, and finds expression in the policy of national education. We doubt if it has even begun to receive equally clear recognition in medical science as in social economics. With the exception of a few general customs—some, perhaps, more honoured in the breach than in the observance; for example, sending children from home to schools in "healthy localities,"—little or nothing is systematically done or ordained for the promotion of health among the infant population. When a particularly gross case of neglect or cruelty comes to light, an edifying display of righteous indignation occurs. When an epidemic is traced to a school, doubtless special and temporary measures are taken to arrest it, and censure is for the moment freely and, for the most part impartially, distributed among the innocent and the guilty, the responsible and those who have had neither opportunity nor power in the matter of prevention, with equal intelligence. When there is a complaint that the food supplied to children in schools is deficient in quantity or quality, there is an outcry. Apart from these episodes, however, nothing occurs to disturb the even current of official and personal routine. Children live their little lives tolerated or spoiled by their parents and natural protectors. The "doctor" is duly consulted when anything ails them, but there is no continuous and earnest endeavour to prevent or repair the mischief hereditary disease has already done in the organism, or to check the occult evils which are preparing the way for future sorrow. If only for the sake of the individual as distinguished from that of the race, the utmost that science can do to blight the germs of disease in the young is demanded and would be requited in later years. Something more than the mere treatment of "ailments" and "children's diseases" is needed to give full and adequate expression to the laws of health as already formulated, and more would be learned about the prevention of disease if the phase of development to which we allude were scientifically studied and practically cared for. It is in the interests of health, mental and physical, with a view to the future of the individual life, the practitioner needs to concern himself, but while earnestly labouring within the boundaries of this limited purpose, he may contribute no mean share of help to the greatest human policy—the moral and physical improvement of the race.

Annotations.

"Ne quid nimis."

ARMY MEDICAL DEPARTMENT.

WE are requested by the authorities at the War Office to make the following announcement:—"The Examination for the Army Medical Department, which was announced to be held in September, has, we understand, been postponed pending the consideration by the Treasury of the new Warrant. It is hoped by the War Office authorities that the Treasury decision may be given in time for an examination to be held before the next session of the Army Medical School at Netley."

THE ZULU WAR.

OUR medical correspondent at Durban, writing by the last mail, reports the health of the troops comprising the division lately known as Major-General Crealock's to have very much improved. Enteric fever was fast disappearing, no fresh case having been admitted into hospital for several days. The chief causes of sickness are still chiefly diarrhœa, dysentery, malarial and enteric fevers. Our correspondent lays great stress on the number of young soldiers, many mere boys, who fill the hospital tents, and who, from age, physique, and incomplete training, are wholly unsuited for a campaign. These growing lads, he adds, should have at least two years at a depôt or regiment in England, during which time they should be slowly and judiciously drilled and trained—not, as at present, *forced* at high pressure by drill sergeants, and sent abroad within two or three months of enlisting.

The weather in Zululand was still pleasant, though towards the coast much warmer, but with cold nights. The transit of sick by sea from Port Durnford had proved very successful, but with the approaching hot and monsoon months the surf will be considerably stronger, even if not altogether preventive of communication with shore. The shelter of tents being very inadequate for the hot weather, some huts for the sick will be erected on a suitable site as speedily as possible. At Fort Pearson there now remain but fifty sick; these for the most part are treated in Zulu huts, and are doing well.

The lady nurses sent out by Government from Netley, under Lady Superintendent Mrs. Deebles and the sisters of the Stafford House Committee, are distributed between the base and auxiliary hospitals at Durban—three at the Convalescent Depôt, Pinetown; others at Pietermaritzburg and Utrecht, where there are still a number of sick from the 2nd Division and Flying Column.

The Bearer Companies, composed almost entirely of trained Zulus, with a sprinkling of the Army Hospital Corps, and which did excellent service at the battle of Ulundi in removing wounded from the field, have been reformed into two sections, placed under the command of Surgeon-Major Hector, and will proceed with the force against Seccocoeni should Sir Garnet Wolseley determine to wage a campaign against that troublesome warrior.

SMALL-POX HOSPITALS.

DR. ORME DUDFIELD'S latest monthly report on the health of his district, Kensington, contains an interesting report by the clerk to the guardians, Mr. Rutherglen, on the number of small-pox cases which occurred in the parish during the epidemics of 1871–72 and 1877–78. Mr. Rutherglen had occasion to prepare a return of these cases in consequence of it having been averred that the opening of the Fulham Small-pox Hospital had contributed to the dissemination of the disease, and aggravated its prevalence in the district. The data show most clearly that this averment was altogether gratuitous. Kensington suffered much less from small-pox in 1877–78, with the Fulham Hospital in its midst, than in 1871–72, when it had no local small-pox hospital and patients had to be removed to the distant hospitals of Hampstead and Stockwell, and there can be no reasonable doubt that the presence of the hospital contributed importantly to this good result; for patients showed themselves more willing to be removed to a hospital near at hand than to one at a distance, and thus the efforts of the sanitary officials to isolate cases of small-pox were materially facilitated. The data point directly to the conclusion that the benefits presumed to be obtained by the isolation of small-pox cases in

conveniently accessible and properly constructed hospitals were fully obtained, while there is not a tittle of evidence to show that the aggregation of cases there was harmful either to the patients themselves or to the neighbourhood; on the contrary, the facts point to a directly opposite conclusion. Mr. Rutherglen's independent examination of the data bearing upon this important question, as affects Kensington, is as opportune as important.

THE LOCAL ANTAGONISM OF ATROPINE AND PILOCARPINE.

SOME interesting experiments on the local antagonism of atropine and pilocarpine were recently communicated to the Académie des Sciences by M. Strauss. If one or two centigrammes of nitrate of pilocarpine are injected beneath the skin of a man, at the end of from two to five minutes the skin covering the injected liquid reddens, and then is covered with very fine droplets of sweat, which appear first, not at the point of the injection, but at the circumference of the area, and extend concentrically to the centre, finally covering the whole area. This local sweat occurs two or three minutes before the salivation, and five or eight minutes before the general perspiration, and it is the more pronounced the greater is the number of sudiparous glands at the spot; the best places being the forehead or front of the sternum; the back of the arm, where injections are most frequently made, being the least favourable, and for this reason, probably, the phenomenon has escaped observation. Reducing the dose, the effect of the injection becomes ultimately strictly local, without the slightest general sweating. Thus, at will, this or that part of the skin may be made to sweat, or lines of sweat may be produced on an otherwise dry skin. The dose with which the effect is purely local is from one to four milligrammes.

By means of subcutaneous injections of atropine the opposite effect may be obtained. If, when a person is in full sweat from the effect of pilocarpine, very minute doses of sulphate of atropine are injected under the skin, the perspiration lessens at the spot almost immediately, and in a few minutes it is totally suppressed. Thus dry areas and lines may be at will produced upon the moist skin. In order to ascertain that the arrest of the perspiration is really the result of the atropine, and not of the mere injection of liquid, an equivalent volume of pure water was injected at certain spots, but without causing any arrest of the perspiration. The dose of atropine which will arrest the sweating is extremely small. One-millionth of a gramme of atropine never failed to produce it in man, and in the cat one-hundred-thousandth of a gramme was sufficient. The sweating skin is thus a test of atropine of extreme delicacy. The sensibility of the sudiparous glands to atropine is greater even than the iris, since the millionth of a gramme of atropine produces no appreciable dilatation of the pupil.

If the skin is frozen with ether-spray, and one or two centigrammes of pilocarpine are injected, the local sweating does not ensue, in spite of the occurrence of general perspiration. Even after the freezing has passed of, the local sweating does not occur, or is brief and slight. Extreme cold appears thus to act as atropine, paralysing the sweat-nerves, a paralysis which persists even after the local cold and anæmia have passed away. This fact is of great interest in connexion with the well-known pathological effect of the arrest of sweat by cold.

The experiments of Luchsinger, confirmed by Vulpian, have shown that in the cat an injection of one or two milligrammes of atropine arrests the sweating caused by a centigramme of pilocarpine, but that if another centigramme of pilocarpine is injected under the skin of one of the paws, the sweat will reappear upon this paw, and nowhere else. In man Strauss has ascertained the same fact. After two centigrammes of atropine had been injected, two milligrammes of pilocarpine were injected half an hour later on another region of the skin. Neither salivation nor general sweating occurred, but merely a local perspiration, very persistent, however, at the point of injection. An attempt was made to ascertain what quantity of atropine rendered large doses of pilocarpine locally inefficacious. In the leg of a strong man six milligrammes of sulphate of atropine were gradually injected, and then, in a single injection, four centigrammes of pilocarpine, without causing even local sweating. In a young cat the same result was obtained after injecting under the skin of the belly three milligrammes of atropine gradually. The subsequent injection into a hind paw of one and a half centigrammes of pilocarpine, and the galvanisation of the sciatic after the method of Luchsinger, caused no perspiration upon this paw.

UNIVERSITY COLLEGE HOSPITAL.

THIS hospital was reopened for the reception of patients on Monday last, very considerable improvements having been effected in the building since it was closed on July 31st. By utilising nearly the whole of the uppermost floor, hitherto devoted to dormitories for the nursing staff, and by other means, the accommodation of the hospital for patients has been increased by as many as forty beds, thus raising the total number to two hundred. The following are the chief changes that have been made:—The children's ward has been transferred to the top (third) floor on the north side of the main building. This ward is of considerable area, but is not very lofty; still, as only fourteen beds are provided in it, there is amply sufficient cubic space allowed, whilst the ventilation and lighting are very complete. On the same floor in the main building, and contiguous to the children's ward, are four small wards for cutaneous and ophthalmic cases; and the sleeping rooms of the resident officers have been transferred here from the south wing. In the north wing, on this floor, two wards have been set apart for cases of erysipelas and allied affections. They have been thoroughly isolated from the rest of the building, and as the cases treated in them are under the care of a separate house-surgeon and nursing staff, every reasonable precaution has been taken to prevent the spread of this disease in the surgical wards. Adjacent to the erysipelas wards are two small wards, for cases of contagious fevers which it is not possible to send away to the Fever Hospital. In the north-west angle of the building are wards set apart for ophthalmic cases. On the next floor, the space in the north wing formerly given up to the children's ward and playground has been converted into one large ward, to contain fourteen beds, for diseases of women, the rest of the wing being devoted to female surgical cases, which, also, as before, occupy the last two wards on this level in the main building. On the first floor no special changes have been made in the building itself, but on the ground floor the accommodation for the out-patients belonging to the skin, eye, and gynæcological departments has been extended. The beds are thus distributed:—Medical: General cases 70, gynæcological 14, cutaneous 4, children 8, contagious cases 2; total, 98. Surgical: General 80, ophthalmic 12, children 6, erysipelas 4; total, 102.

The enlargement of the hospital is, however, only a part of the reconstruction that has been carried out; the ventilation of the wards has been attended to. In his own wards, the plan devised by Professor Marshall has been adopted. In the rest, Tobin's system is employed. Attention has also been paid to the construction of the watercloseta, and their connexion with the wards; the lobbies, which formerly led into them at the corner of each ward, having been removed, and the ventilation of the closets improved. A point of detail deserving of imitation in other institutions is

the adoption of cupboards let into the wall of each closet, and ventilated by the use of perforated zinc, for the reception of bed-pans when the contents of these have to be kept for inspection. The drainage of the hospital has also been renewed, pipes of Doulton ware being substituted for brick drains. During the progress of this work a cesspool was brought to light beneath the floor of the out-patients' waiting-room, and it was promptly removed. The interior of the building has been entirely repainted, the walls, formerly coated with Parian cement, being now covered with silicate paint, an effective dado of a chocolate-brown being carried round the walls. Amongst other recent improvements has been the formation of a "chloroforming room" beneath the raised seats in the operating theatre, so that patients about to be brought into the theatre may be first anæsthetised. The idea of thus utilising the space indicated is due to Mr. Newton H. Nixon, the energetic secretary to the hospital, to whom, indeed, many other of the practical suggestions that have been carried out are owing. Certainly the authorities are to be congratulated on the success attending their efforts to extend the area of usefulness of the hospital, and to improve its sanitary condition.

INFANT MORTALITY IN THE STRAND DISTRICT.

AT a recent meeting of the Strand District Board, on the reading of the medical officer's usual fortnightly report, a discussion took place upon the excessive rate of infant mortality prevailing in that metropolitan sanitary district, and a motion was carried asking the medical officer of health (Dr. Conway Evans) for a special report on the subject. The Strand District Board deserves credit for having, although tardily, asked for information concerning the remarkable death-rate of infants within their sanitary district, to which we have more than once called attention in these columns. During the eight years 1871–8 the births of 3974 children were registered within the jurisdiction of the Strand District Board, and the deaths of 887 infants under one year of age were recorded within the same area. Thus, during the eight years the rate of infant mortality under one year was equal to 223 per 1000 of the births. These facts are derived from the Registrar-General's Annual Summaries for the eight years, and may therefore be accepted as beyond dispute. The lowest rates of infant mortality in these eight years were 205 and 209 in 1873 and 1876, the highest 242 and 244 respectively in 1874 and 1878. Dividing the eight years into two equal periods of four years, the average rate was 223 in the first and 224 in the second period. Thus this slaughter of innocents is increasing rather than declining. The average rate of infant mortality in London during 1878 was 164 per 1000, whereas in the Strand district it was 244. We quite agree with the Strand District Board that this enormous death-rate of infants requires investigation. Investigation in such cases always does some good, for it calls attention to the magnitude of the evil. We are convinced, however, that if the Strand District Board, or a committee of the Board, were to make a house-to-house visitation through the worst of the "slums" within their district, their wonder that so large a proportion of the infants born die in the first year of their life would be changed into wonder that so large a proportion survive that age. That much of the mass of infant mortality is due in the Strand district, as in other urban sanitary districts, to the ignorant neglect and to the intemperance of the parents is beyond question. When one sees, however, the repulsive dens in which many of the people in the Strand district are housed, at comparatively enormous rents, it ceases to be matter for surprise that parents who are so lodged should be dirty in their habits, neglectful of their family duties, and given to intemperance. The health of infants in such houses as abound in the Strand district is next to impossible, the ignorance and neglect of parents undoubtedly magnify the evil, but without improvement of a large proportion of the dwellings it would be hopeless to expect any permanent reduction of the rate of infant mortality. We shall look for Dr. Conway Evans's special report upon this subject with interest. There is no other part of London where the rate of infant mortality in recent years has shown so large an excess as in the Strand district.

NEGLECT OF VACCINATION IN BRADFORD.

THE remarkable immunity from small-pox which the English population, except that of London, has enjoyed since the beginning of this year should not be allowed to shut our eyes to the marked defects in the administration of the vaccination laws, the results of which in epidemic seasons are apt to discredit the efficacy of true vaccination as a protection against small-pox. We have often urged that vaccination should be put under the control of sanitary authorities and their medical officers of health. It is satisfactory, therefore, to see that many medical officers of health now recognise the desirability of remarking upon the efficiency or otherwise of vaccination within their sanitary districts, although they have at present no authority or control over the administration of this important department of public health. Mr. Harris Butterfield, the medical officer of health for the borough of Bradford, laments that "so many children in Bradford escape vaccination." He further shows that the proportion of children who escape the operation of the so-called Compulsory Vaccination Acts is an increasing proportion. According to the Local Government Board vaccination returns, the proportion of children "unaccounted for" in the Bradford Union is annually increasing; it rose from 4·8 per cent. in 1874, to 5·5 per cent. in 1875, to 5·9 per cent. in 1876, and to 8·2 per cent. in 1877. Indeed it is pointed out that in Bradford west district the proportion of children who remained "unaccounted for" in 1877 was nearly equal to 11 per cent. This neglect of vaccination in Bradford signifies that of the 6797 infants born in the borough during 1877, probably 550 are now living unvaccinated, without taking into account the unknown number of infants born since the beginning of 1878, but still unvaccinated, or those "unaccounted for" in years previous to 1877. Well may Mr. Butterfield remark that the "total of unprotected persons would make the next visitation of small-pox among us unusually widespread and severe." Can it be necessary to wait for the next small-pox epidemic to do its worst among the unvaccinated in Bradford? If the Local Government Board is helpless in its central control of vaccination, it is time that some other arrangements were made for its more efficient local administration.

THE CATALOGUE OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY'S LIBRARY.

THE library of the Royal Medical and Chirurgical Society has justly obtained a wide reputation. It was started with the foundation of the Society in 1805, and now comprises upwards of 31,000 volumes. The task of producing a catalogue of this large collection is no light one, and the publication of this catalogue, which has just taken place, is an event which should not be passed without notice. The labour of its compilation has extended over four years, and the Council are not only to be congratulated on its completion, but on the issue of a work which is drawn up, we may say, in a thoroughly scientific and scholarly manner. It may be taken as a type of the manner in which all such works should be compiled. The work in question consists of three large volumes—two devoted to an alphabetical list of authors, transactions, &c.; and the third to an index, catalogue of subjects, one main (and novel) feature of the latter being the grouping of the works on each subject in

strict chronological sequence. In a very interesting preface to the Catalogue are contained the rules that have been followed out in the work of compilation, and from them many valuable suggestions to librarians may be gathered. The preface opens with a sort of retrospect of the previous history of the library. We learn that the first printed catalogue was published in 1816 by Dr. Thomas Bateman, that in 1819 a supplementary catalogue was issued, and that in 1844 Mr. Benjamin Phillips welded these two together in a reprinted issue of the catalogue, when he wisely took occasion to curtail some of the remarkably long and cumbrous headings by which the earlier writers were wont to cover the title-pages of their works. Then, in 1854, a third catalogue was printed under the supervision of Mr. Jas. Dixon, bringing the contents up to the then state of the library.

"It is now five and twenty years since the commencement of the compilation of this catalogue (1854), and three and twenty from its completion in type (1856). At that time the number of volumes in the library was about 17,000. Since then large additions have been made, and the number of volumes has been nearly doubled, amounting now to more than 31,000."

Then follows a list of some of the numerous subjects which in this quarter of a century have come to the front, many of them having quite an extensive literature of their own. The list itself occupies a page, and a glance at it speaks in no doubtful language of the enormous scientific activity that has characterised this period. The favourite ejaculation of Dominie Sampson recurs involuntarily to the mind as this bare enumeration of subjects is presented to one.

We feel sure that none who will have occasion to use this catalogue will think the terms in which we have spoken of it above are unwarranted. It is a work of which the Society may well be proud, and all praise is due to the Society's librarian, Mr. B. R. Wheatley, for the immense care and painstaking he has bestowed on its compilation.

MORTALITY STATISTICS AND SANITARY CONDITION.

PUBLIC appreciation of the value of mortality statistics, as trustworthy indications of sanitary condition, has survived the vigorous onslaught which they sustained a few years since; indeed, popular confidence in their teaching was never greater than at the present time. We have, however, still much to learn regarding the most trustworthy method of applying mortality statistics for the comparison of the sanitary condition of different populations. The labours of many of those medical officers of health who are now devoting their lives, or the best part of them, to the study and practice of public hygiene, are, however, affording material assistance to the progress of the practical application of vital statistics. Some lectures on public health which Dr. James B. Russell, the city medical officer of health, delivered a few months since in Glasgow, under the auspices of the Lord Provost, magistrates, and Town Council of that city, in the Corporation Galleries, have recently been published by the Town Council, and contain much valuable material for use in this direction. In the first lecture, when dealing with the influence of density of population upon the composition of the death-rate, some very suggestive figures are given to facilitate the comparison of the mortality statistics of Glasgow with those of the insular rural districts of Scotland during the ten years 1861–70. During these ten years the average annual death-rate was equal to 30·3 per 1000 in Glasgow, but did not exceed 16·4 per 1000 in the insular rural districts. The Glasgow mortality was thus nearly double that which prevailed in the rural districts; or, more definitely expressed, showed an excess of 84 per cent. Now, in order to test the way in which residence in crowded and insanitary urban districts affects the death-rate, Dr. Russell has, to some extent, analysed the composition of these two gross death-rates. He shows that, whereas the zymotic death-rate was only 2·9 per 1000 in the rural population, it was 7·7 in Glasgow; and that from pulmonary diseases, including phthisis, was in these two populations 3·5 and 10·2 per 1000 respectively. The urban mortality from zymotic diseases exceeded the rural mortality by 168 per cent.; expressed in another way, it was more than two and a half times as great. The excess from pulmonary diseases was 189 per cent., and still larger than the excess from zymotic diseases. Excluding these two classes of disease, the excess of mortality in the urban district from all other causes of death did not exceed 24 per cent. The excessive fatality of lung diseases in towns is no new revelation, but Dr. Russell's figures suggest that the comparison of rates of mortality from those diseases is as important as a test of sanitary condition as of those from zymotic diseases. It is to be regretted that the English Registrar-General's urban mortality statistics afford no information relating to the mortality from diseases of the respiratory organs in the principal large English towns.

A LECTURE ON THE ZULU WAR.

A REMARKABLY interesting lecture, which filled St. James's Hall to overflowing, and was listened to with profound attention, was delivered on Tuesday evening by Mr. Archibald Forbes, the war correspondent of the *Daily News*, upon the subject of the Zulu war. He sketched with much point and precision the characters of Lord Chelmsford, Lord W. Beresford, Colonel Buller, Colonel Wood, and other central figures of the war, enlivening his remarks with numerous anecdotes derived from his personal experience. Thus, referring to the somewhat formal and unbending character of Colonel Buller, and to the easy and jovial disposition of Lord Beresford, who is "a sort of fellow everyone soon calls 'Bill,'" Mr. Forbes stated that on one occasion, after "Bill" had run his sword through a formidable Zulu in a hand-to-hand encounter, which had been watched by many officers, Colonel Buller met him with a hearty "Well done, Bill," and then immediately, as though ashamed of his cordiality, addressed him with "Beresford, bring up your men." He gave a vivid account of the field of Isandlhwana, as seen by him four months after the action. The bodies he described as forming an almost continuous chain, with here and there a knot where a few had gathered together to fight the enemy, and had stood back to back till transfixed by assegais. He gave an affecting account of the finding of the body of the Prince Imperial, to which, however, he was unable to add anything not already known. The body was stripped, and presented many superficial assegai wounds, with two that would certainly have been fatal, one passing through the left breast, and the other above the clavicle through to the back. The Prince was in the habit of springing into the saddle at a bound, but it is supposed his horse became unruly, and, after several efforts to gain the saddle, the Prince fell, and on rising found that his horse had run away, and, after a short course, he turned at bay, and was quickly despatched. A vivid picture was drawn of the grief and unavailing regret that was felt throughout the army when the fact became known. The most exciting part of the lecture was, however, the account of the battle of Ulundi, in which the military power of the Zulus was finally crushed. Several instances of bravery of very exceptional character were recorded—as the recovery of a wounded sergeant by Lord W. Beresford; the sergeant, reluctant to mount Lord Beresford's horse, lest two lives should be sacrificed, being bluntly told he would have his head punched if he lost *his;* and Lady Lovelace's son, who, having his jaw smashed with a bullet, had it bandaged, and rode

into action without more ado. The medical department was scarcely more than alluded to, but appeared to have performed their duties, as usual, coolly and unostentatiously.

METROPOLITAN SANITARY NOTES.

DR. G. PADDOCK BATE, medical officer of health for the parish of St. Matthew, Bethnal-green, gives, as usual, a plain and concise statement of the sanitary events that have occurred in his district during the past year. In the matter of inquests he comments very emphatically on the unsatisfactory state of the law that ordains the holding of them at public-houses, and shows how in many ways the usefulness as well as the dignity of the proceedings would be enhanced by the abolition of that barbarous process called "viewing the body," the "friendly glasses" taken at these inquest gin-shops by the jurymen whilst waiting for their coroner, and the irregularities that sometimes arise in consequence. The want of a mortuary appears side by side with the inquest question, and is, perhaps, of equal importance, but the vestry of Bethnal-green have not yet provided such an establishment. Vaccination appears to be very efficiently carried on in this district, and a comparative immunity from small-pox is the practical result. Cowhouses, slaughterhouses, and bakehouses offer nothing for special comment. Dr. Bate very properly urges upon the attention of his readers the subject of latrine accommodation for women, and we are sure that few other matters can so profitably engage the attention of metropolitan medical officers of health.

The Board of Works for the Poplar district is served by two medical officers of health, Mr. F. Mead Corner having recently taken charge of the southern section, in succession to the late Mr. Ellison, Mr. R. M. Talbot retaining the northern section. The former officer, in presenting his first report to the Board, gives some rather interesting particulars as to the manner in which the infection of typhus appears to have been spread by the clothing of a seaman arriving from abroad, and which was sent to be washed. Some instances are also given of the careless manner in which cowkeeping at the east end of London is conducted, showing in a very pertinent way the necessity that exists for the new order recently promulgated, placing dairies and cowsheds under the supervision of the Metropolitan Board of Works. This district, having a large river frontage, has during the last nine months been engaged in a friendly discussion with the port sanitary authority, the officers of the latter having found a large number of closet-outfalls opening into, and of course very much polluting, the river. These are being closed, and sent into the main sewers. The interesting point of Mr. Talbot's report is a somewhat forcible illustration of the apparent connexion existing between diphtheria and sewer-gas, foul manure, &c.

LATENT STIMULATION OF MUSCLES.

M. MAURICE MENDELSSOHN has studied the duration of the period of latent stimulation of muscles in the frog and in man, in the laboratory of M. Marey and in the wards of M. Charcot, employing a myograph drum of rapid rotation, and stimulating the muscle by means of an automatic interrupter at corresponding periods in the rotation of the drum. His conclusions (communicated to the Académie des Sciences) are that the period of latent stimulation of the gastrocnemius in the frog is not constant, and that it is related to the muscular elasticity, excitability, and contractility. In man the results agree, in some points, with those obtained in the frog. In a healthy individual the duration of the latent stimulation varies according to age and sex, and it varies also between individuals who are apparently in the same condition. It varies in the same individual between the corresponding muscles of the two sides, and between the flexors and extensors of the same joint. It is not always briefer in those individuals who are the more vigorous and possess a well-developed muscular system. The duration varies from ·004 to ·01 second, the most frequent average being from ·006 to ·008 second. The duration is related to the amplitude of the curve traced by the muscle, only in observations on the same muscle, not in different muscles of the same subject, nor in different subjects. It lessens in the contracted muscle, and increases or diminishes with the diminution or increase of the electric current. In disease M. Mendelssohn has found a diminution or increase of the time lost from ·002 to ·010, and more, in comparing the disease with the healthy side, or with the average found under normal circumstances. He has found an increase of the time lost in old hemiplegia complicated with muscular atrophy, in progressive muscular atrophy, in amyotrophic lateral sclerosis with pronounced muscular atrophy, in progressive locomotor ataxy in the second and third period, in insular sclerosis, and in paralysis agitans of long duration. The time lost was lessened in hemiplegia with contracture, in spasmodic tabes dorsalis, in senile chorea, and in hysterical contracture. The author concludes that the duration of the latent stimulation in the normal state is not constant, and is not related either to the muscular force or to the volume of the muscles. In pathological conditions it is in inverse proportion to the excitability and contractility of the muscles, and depends upon the condition of their nutrition.

IRISH MEDICAL ASSOCIATION.

AT a meeting of the executive of the Irish Medical Association, held on Tuesday, the 16th of September, at the Royal College of Surgeons, Dublin, Dr. Speedy, Chairman of Council, presiding, it was moved by Dr. J. W. Moore, seconded by Dr. Pollock, and unanimously resolved:—"That the Council of the Irish Medical Association have heard with the liveliest satisfaction of the appointment of Dr. T. W. Grimshaw as Registrar-General for Ireland, and hereby convey to him this expression of their gratification at his well-merited promotion to such a responsible and important position under Her Majesty's Government. At the same time, the Council feel much regret in accepting the unavoidable resignation of Dr. Grimshaw as a member of the executive of the Association, and desire to express their grateful thanks to him for his inestimable and unwearying services to the Association and to the profession at large."

A SERIOUS PERIL TO HEALTH.

COMMUNICATIONS have reached us, and observations been made, which compel us to draw serious attention to the condition of some of the cemeteries within the metropolitan district, which are rapidly becoming sources of peril not only to the neighbourhoods in which they are situated, but to the whole metropolis. The emanations from some of the newly-opened graves is so horribly offensive as to occasion nausea among those who attend at funerals. As cases of actual illness, after being present at interments in some of the cemeteries, have occurred, there can be no doubt about the danger. Meanwhile the crowding of the graves is apparent. The number of bodies laid in the earth may not be excessive when calculated upon the whole acreage of the space licensed, but with an eye to the future the ground seems to be appropriated in parcels, while in some of the older cemeteries there is really no room for more graves, and the licence ought to be withdrawn. This is a matter of so much concern to the health of the community that we forbear to run the risk of weakening the evidence of facts by any comment. The intervention of the Secretary of State should not be delayed.

DIPHTHERIA.

DIPHTHERIA appears to be occupying the attention of physicians in Russia as well as in other parts of Europe. Indeed, Russian mortality returns would seem to show that there are special reasons for this attention, for the disease has latterly assumed almost pestilential proportions in many districts of the vast empire. We learn from the *Gazette of the Prefecture of Odessa* that the medical men of that city have been for some time engaged, by direction of the municipality, and under the presidency of the inspector of the medical delegation, in endeavouring to determine the conditions not only of a late sudden development of diphtheria in that city, but of small-pox also. In aid of the inquiry a map is in preparation showing the distribution of the two diseases in the city over a period of three or four years, and, according to the *Gazette*, it has been suggested that the sudden appearance of the two diseases may have some relation with the decomposing blood which is found in numerous parts of the city, and which arises from the slaughtering of poultry and young cattle.

THE SICK IN WORKHOUSES.

MR. HEDLEY, one of the inspectors of the Local Government Board, attended an ordinary meeting of the managers of the Central London Sick Asylum district on Monday last, and drew attention to the numerous vacant beds in the Highgate and Cleveland-street Infirmaries whilst the wards in St. Pancras Workhouse Infirmary were filled with sick.

THE following Fellows of the Royal College of Physicians have been nominated for election, at the quarterly council on the 16th prox., for the office of Examiner in Medicine at the Royal College of Surgeons, in the vacancy occasioned by the resignation of that office by Dr. Sieveking, elected one of the censors—viz., Dr. Broadbent, Dr. Dickinson, and Dr. Gee. Other candidates will, no doubt, be brought forward before the election. The vacancy in the Court of Examiners caused by the resignation of Mr. Erichsen will not be filled up until a subsequent meeting, at which it is generally expected Professor John Wood, F.R.S., will be elected.

THE death of Mr. Edward Wickham, M.R.C.S. Eng., of Holloway-road, at the ripe age of eighty-four, is announced. It is said that he was the oldest member of the College of Surgeons, his diploma dating from 1816. He was in practice before 1815, and has seen patients at his house within the last five years. Mr. Wickham carried on a large midwifery practice, and was much respected by his professional neighbours.

THE *British Journal of Dental Science*, published by Messrs. J. & A. Churchill, will in future appear fortnightly instead of monthly, as heretofore. No change will be made in the size or annual subscription, save a slight addition for the extra cost of postage. The first fortnightly number was issued on the 13th instant.

DR. RAMSKILL, after twenty years' service, resigned on the 23rd inst. his post of physician to the London Hospital, and on the same day was elected consulting physician to the institution.

SURGEON-MAJORS E. J. BOULTON and R. W. HARE, M.B., have arrived home from Natal invalided from the effects of disease contracted in the Zulu War.

THE Okehampton Guardians and Rural Sanitary Authority have, upon reconsideration, again declined to make a conjoint appointment of a medical officer of health.

HEALTH OF LARGE ENGLISH TOWNS.

THE THIRTY-EIGHTH WEEK OF 1879.

THE death-rate in our largest towns continues abnormally low. In twenty of the largest English towns, containing nearly a third of the entire population of England and Wales, 5228 births and 2751 deaths were registered in the week ending last Saturday. The births exceeded by 46, while the deaths were so many as 619 below, the average weekly numbers in 1878. The deaths showed an increase, however, of 111 upon the low number in the previous week; they were equal to an annual rate of 19·4 per 1000, against 19·1 and 18·7 in the two previous weeks. During the past twelve weeks of the current quarter, the death-rate in these towns has not averaged more than 18·3 per 1000, whereas it was equal to 20·5 and 24·0 in the corresponding twelve weeks of 1877 and 1878. The lowest death-rates in these towns last week were 11·5 in Portsmouth, 12·2 in Norwich, 14·8 in Brighton, 15·3 in Wolverhampton, and 15·7 in Nottingham; while the rates in the other towns ranged upwards to 20·5 in Sunderland, 20·8 in Leicester, 22·6 in Salford, 24·5 in Newcastle-upon-Tyne, and 26·5 in Liverpool.

The deaths referred to the seven principal zymotic diseases in the twenty towns further declined last week to 520, from 654, 566, and 560 in the three previous weeks; 226 resulted from diarrhœa, 118 from scarlet fever, 63 from whooping-cough, and 54 from measles. The annual death-rate from these seven diseases averaged 3·7 per 1000 in the twenty towns, and ranged from 0·0 and 1·4 in Wolverhampton and Oldham to 4·9 and 6·3 in Leeds and Liverpool. The high zymotic death-rate in Liverpool was due to diarrhœa, measles, and scarlet fever. Diarrhœa fatality showed a further general decline, but was proportionally excessive in Liverpool, Salford, Leeds, and Leicester. Scarlet fever was most fatal in Sunderland. Sixteen of the 21 deaths referred to diphtheria in the twenty towns occurred in London. Small-pox caused but one death in the twenty towns last week; this was recorded in London. The number of small-pox patients in the Metropolitan Asylum Hospitals has steadily declined during the past five weeks from 111 to 70 on Saturday last. Six new cases of small-pox were admitted to these hospitals during last week, against numbers decreasing from 35 to 3 in the five previous weeks. The decline in the prevalence of small-pox which may be inferred from these figures, at a time when the fatality usually increases during epidemic years, encourages the hope that the recent epidemic in London is rapidly dying out. The next few weeks will probably determine this.

Correspondence.

"Audi alteram partem."

HONOURS IN THE ARMY MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—It has often occurred to everyone who has studied the welfare and dignity of medical men in the army, or even in the navy, how few are the honours conferred upon them. This remark amounts to a truism so patent and so well recognised, no less by you who have done so much in advocating their cause, than by the public which regards apathetically all affairs affecting our profession which do not also appear to affect it, that I do not propose to dwell on the subject, but rather to call your attention, and the attention of your numerous readers, to a detail which seems to me to be an aggravation of neglect, if not of injustice.

Comparisons are said to be odious, but comparison is a moral salt, by the use of which we improve ourselves and attain as far as possible to perfection. Comparison is sometimes a duty, and we should never shirk a duty, however unpleasant.

If, then, anyone will be at the trouble to take up an Army List, and, after running his eye over the names of the combatant and medical officers, if he will compare the number

and character of the distinctions, not hereditary but acquired, borne by these two classes, such as the C.B., K.C.B., V.C., knightship or baronetcy, he will be astonished to find how much more frequently an admiring Government has remembered the former than the latter. Still the British Medical Department is not quite forgotten, and half a loaf is better than no bread. Let the observer, however, proceed one step further in his comparison; let him peruse the dry statistics of the Indian Army List. If surprise overtook him before, wonder may now render him mute. Amongst the Surgeons-General of the Indian Medical Service I believe there are no titled men, and amongst the Deputy Surgeons-General, whether in Madras, Bombay, or Bengal, I think there will be difficulty in discovering a single name honoured by a star, a ribbon, or an order. Amongst the next rank, the Surgeon-Major, a few medals may have been scattered for acts of personal skill or courage during a campaign, when their fortune gave them an opportunity of exhibiting these qualities. I do not now drag forward for consideration that other matter, which has been so often dealt with—viz., relative rank,—though it is difficult to imagine why the highest officer of the Medical Department, the Surgeon-General, should only rank with a Major-General, who is far from being the highest officer of the combatant class. I prefer to confine my remarks to decorative distinctions—if you will allow the phrase—and to ask why this state of affairs should exist in the Medical Department of the Indian Army. That it is not a condition unheeded by its members I know, for personally I have heard complaints about it. Surely their lives are not more easy, their duties less arduous, or their dangers and responsibilities smaller than those of officers in the British Medical Service, or of officers in any English service whatever? On the contrary, I have always heard that life in India is less attractive and tolerable than at home. This fact is generally acknowledged; but in answer it is said that the Indian Medical Service is extremely well paid, and in money is their reward. Pay, Sir? Is so much lucre, then, to be considered in every case an adequate repayment for a life devoted in expatriation to the service of the mother country? Is a man's brain and blood to be weighed in the balance, like so much beef, with pounds, shillings, and pence? Are none of those honorary and honourable distinctions, which, because they are regarded as such by mankind, are worth possessing, to be thrown into the scale? Are none of the amenities which relieve the burden of life by making it more grateful, to be experienced by them? Is the labourer worth nothing, not one iota, more than his actual hire? And if not, why not? I ask. I ask the question, too, in no grasping spirit; for, being a civilian, I have nothing to expect. As everybody is aware who knows anything about India, these honours are not withheld because Indian life is luxuriously easy or its duties light. And pay, no matter how good, is, after all, but the grudging reward of laborious service. This pay, too, is a delusion; all that glitters is not gold. Many an officer in India who has a wife and family to maintain in England can tell you, Sir, what this pay amounts to; for, with the present depression in silver and the rate of exchange, the rupee has so greatly lost in value (shall I say irretrievably?) that an officer sending money to England for the purpose just alluded to, or for any other, is deprived of twenty-five per cent. of his remittance. No, it is for none of these reasons that the medical officers of the Indian service are thus treated. I fear the reason is chiefly to be found in a recognition of the old saying, "out of sight out of mind," as well as in that habitual neglect of all things medical characteristic of Governments everywhere. Whoever is situated near the chief seat of Government, and has the power or the influence to keep his name and actions continually under the notice of the supreme civil and military authority, has the best chance of being remembered at the distribution of the loaves and fishes. A position like the one indicated may perchance account for the oblivion that less frequently overshadows the British Medical Service than the Indian. India is far removed from the Horse Guards, and is a huge country whose different provinces and corners are at great distances from the seat of the Indian Government itself. The Medical Service there, too, is larger than at home, therefore its individual and component parts are easily and comfortably overlooked when convenient.

Honours of this kind may be regarded as a mere detail by some, by those possibly whose aspirations end with an attainment of the £ *s. d.*, but there are many whose ambition does not rest at that limit. It is by some attention, therefore, to details which involve no ordinary human feelings that this lauded but notwithstanding imperfect Indian Medical Service may be rendered more attractive, more honourable, and yet more efficient.

I am, Sir, yours faithfully,

Sept. 22nd, 1879. M.B. & C.M.

MOUNTAIN AIR IN PHTHISIS.

To the Editor of THE LANCET.

SIR,—I have seen so many times, within the last twelve months, the antiseptic action of mountain air referred to as if it were the "invention" of Dr. Clifford Allbutt, that I am at length induced to call attention to the following paragraph which occurs in a paper I contributed to the annual meeting of the British Medical Association at Sheffield in 1876:—"The air is, as I have already said, antiseptic; it is clear, bright, and pure; and there is *an almost entire absence of those organic particles which play such an important part in promoting putrefaction.*" (The italics are in the original.) The subject is also referred to in a little work I published in 1877, on "Recent Researches in the Treatment of Phthisis," which has been some time out of print; and also in an article I contributed to the *Fortnightly Review* for August, 1877, entitled "Sea or Mountain."

I am not certain that the idea *originated* with me, nor do I wish to claim any credit for it; but, having twice visited Davos nearly ten years ago and frequently written about the place since, and holding very decided views as to the cases to which it is and the cases to which it is not suitable, it would have been, perhaps, a little more in accordance with ordinary literary courtesies if my papers on this subject had not been wholly disregarded by those who have recently written on it.

I am, Sir, your obedient servant,

Hertford-street, Mayfair, Sept. 19th, 1879. I. BURNEY YEO.

THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Your occasional correspondent in India has, in the letter published in THE LANCET for 2nd August, 1879, taken so erroneous a view of the relations between the Government of the North-west Provinces and Oudh and the Surgeon-General thereof, that I must beg you to be so good as to state for the information of your readers what are the actual facts.

The Surgeon-General is the adviser of Government in all matters connected with the appointments and general interests of civil surgeons, and everyone of inferior rank in the medical department; and under him alone, and with his advice, the control of the medical department is carried out.

The object of the resolution quoted by your correspondent has been entirely misunderstood by him, as it was published merely to indicate to civil and medical officers change of procedure in certain particulars, which it was necessary they should know. Your correspondent was not entitled to infer from it that no other relations were in future to subsist between the Government and the Surgeon-General. He should have known that it is not the custom for Government to make public who are its advisers.

Yours faithfully,

A. CHRISTISON, M.D.,
Surgeon-General, North-West Provinces and Oudh.

Naini Tal, 1st Sept. 1879.

To the Editor of THE LANCET.

SIR,—In your issue of August 2nd you published some remarks of an occasional correspondent on the Indian Medical Service. It is your wish to advocate the interests of our service; it is mine to show, with your permission, that this cannot be done by using such statements as those to which I refer. Anyone in authority, or otherwise acquainted with the true position, must see at a glance that the account given of it in your columns will mislead those who are less informed, and is unfair to the Govern-

ment, which cannot defend itself from imputations of the kind.

I cordially agree with those who think that the public services of medical officers are often ill-requited. This is especially true in the case of our brethren who render conspicuous military service to the State. But I speak from very long experience when I say that we can bring no charge of inappreciation against the civil governments in India. Both in Bengal and other provinces I have known the advice of medical officers so eagerly sought and so highly esteemed by heads of local governments, that something akin to jealousy has arisen in the minds of other ministerial officers, while I have never, unless in direct consequence of his own acts, known the advice of a medical officer entitled to be taken into counsel disregarded by a lieutenant-governor. Overruled or outweighed the advice may be, in the very nature of things, but it has never had less than its due share of attention. Let us, by all means, assert our claim to the highest consideration that we can earn for ourselves, but we shall be put out of court altogether if, in the temper of irreconcilables, we blind ourselves to the advantages we enjoy, and suffer those who know the truth to see that we are willing to carry wrong impressions to the minds of those who do not. We have, without doubt, our place among the powers around the throne in India. We make ourselves only ridiculous if we exhibit to the public the ignorance and petulance of ill-humoured children, because we are not formally enthroned ourselves.

This introduces the first point in the article—viz., your correspondent's comment on the official resolution appointing Dr. Christison to be head of the Civil Medical Department in the North-west Provinces of India. Certain details of duty relating to the disposal of subordinate offices are specified in the *Gazette*, and a grievance is made of the fact that the order does not formally transfer to Dr. Christison the power of selecting commissioned officers for the higher civil appointments. Surely this is very unreasonable. No lieutenant-governor could, if he would, formally delegate such absolute power to the chief of any department. Does the writer expect you to believe for a moment that this order is intended to embrace all the functions of a civil surgeon-general? If it were so, the public might well cry out at the pay he receives for the work required of him. The order simply aims at preventing misunderstanding by declaring that in future the new officer will do certain duties which have been hitherto done by others. It does not deal with the higher functions which of necessity attach to the position. The Surgeon-General is the chosen adviser and referee of the Government on every point of medical administration. Capacity for these high functions alone governs his selection, whereas your correspondent would have you think him little better than a clerk with a few matters of office routine on his hands. It is not true that Dr. Christison will have nothing to do with the appointment of civil surgeons. He will have everything to do with it except the signing of the *Gazette*. We all know where the real power lies in these cases, which is nominally, though responsibly, exercised by a governor. Your correspondent himself says that Dr. W. Walker, inspector of gaols and hospitals, holding a position inferior to that of surgeon-general, was always consulted before an appointment was made. Was this mentioned in the *Gazette* when Dr. Walker was put in office? Certainly it was not, and can you suppose that Dr. Christison, now selected for a post of higher authority, will be treated with less consideration—that the local government has deliberately deprived itself of a responsible adviser and stripped its surgeon-general of that which chiefly gives *prestige* to his office? There is not a single department of the public service whose chief is formally invested in the *Gazette* with absolute power over the higher offices under his control. No one who knows Dr. Christison will fear that the status of his office will suffer in his hands; for no one in his position who has not, of his own act, alienated the confidence of his government has ever had to complain of the withdrawal of it. Your correspondent's assumption can only be explained by using words of counter-imputation, which are better avoided.

Your correspondent is wrong in his account of Dr. Irving's retirement from Bengal. He would have you believe that Dr. Irving had thrown up his office before the allotted time for his departure. The truth is that Dr. Irving has remained longer in administrative office than is usual. Five years is the appointed time for a deputy surgeon-general to serve in that capacity. Of this period six months may be spent on leave, and officers commonly use the privilege to shorten their service by taking leave after four years and a half. Dr. Irving has not done this. After announcing his intention of retiring in June, he has protracted his stay until September, and has at this date, therefore, some weeks to remain. Whatever effect on him his self-made relation with the Bengal Government may have had, it has clearly not shortened Dr. Irving's service, which must in any case expire in December, and might under custom have ended in June.

The case is not much better respecting the appointment of Dr. Irving's successor, which is made to appear as though it involved the advancement of personal interests to the neglect of other and better claims. It is true that by the change Dr. Payne assumes an army rank which he has once refused, and thereby defers the promotion of a junior. Hence the outcry spoken of in your journal. Remonstrance would have been natural and defensible enough if it had not been made a vehicle for personal invective and gross misrepresentation. The word "job" has been used with virulent expletives to characterise a proceeding under which an officer relinquishes a large portion of his income because the Government say they want his services. The fact is they want the services of a man whose experience has been gained in the province, who has practical knowledge of its institutions which cannot be efficiently controlled by an officer from the army, as past history has abundantly shown. The sole object of the new organisation is to provide qualified advisers for local governments, and relieve them from the military element hitherto forced upon them. Dr. Payne has been twenty-four years in Bengal, and has had executive charge of almost every kind of civil medical establishment under Government. This has led to the selection, with the hope that at least one main cause of the scandals mentioned by your correspondent may be removed by taking the control of civil institutions out of the hands of men who are strangers to their practical working. It is not true, again, that Dr. Payne has been "allowed to retain his appointments while accepting promotion." Dr. Payne has held four appointments; three of these he relinquishes entirely, as well as a consulting practice; one only he retains, receiving less than half the salary hitherto paid to him for this one. This reduces in a very small measure the loss he sustains, and the State benefits to the extent of half the salary. Finally, it is not true that a rule of the service prohibits the promotion of an officer who has once refused it. There is no rule of the kind, nothing whatever to limit the discretion of Government; it can be adduced as a custom only, for the reason that hitherto no one has yet wished to recall his decision; and certainly no one has been further from wishing it than Dr. Payne. Even were there a written law of the old military service against such promotion, it would not apply to the proceedings in question, which are a part of the commencing movement to emancipate the civil governments from military medical administration.

Your obedient servant,

Sept., 1879. VINDEX.

MEDICAL DISTINCTIONS.

To the Editor of THE LANCET.

SIR,—In a letter which appeared in THE LANCET of the 7th June last, Dr. Henry Williams suggests the establishment of four grades of medical practitioners—viz., the State doctor, who would be equivalent to the ordinary general practitioner; the consulting State doctor, or, in other words, a general practitioner not practising pharmacy, and who is called in by the State doctor; consulting physicians and surgeons; and, lastly, Queen's physicians and surgeons, the last grade to be the highest in the profession, and to stand on a similar footing to Queen's Counsel in the legal profession. In my opinion, the fourth grade is quite unnecessary; the titles are misleading, for the public would infer that they were members of Her Majesty's household. Three classes of practitioners are quite sufficient for all practical purposes.

That some reform in this direction is required cannot be doubted, and the present seems to me to be a favourable opportunity for directing further attention to the subject, which you have already dealt with in a leading article in your issue of the 24th May last. But the difficulty is as to

the exact nature of the improvement and the general acceptation of the same by the profession. It appears to me that it can only be brought about by an Act of Parliament, by the insertion of certain clauses in the new Medical Act Amendment Bill when that is brought in again, which shall legalise the several grades of the profession.

The three classes to which I have referred should be—1st. The general practitioner, who would correspond with the solicitor in the legal profession. 2nd. Physicians and surgeons, who would answer to barristers-at-law. 3rd. Consulting physicians and surgeons, whose status would be similar to that of the Queen's counsel. The general practitioner should possess the titles L.R.C.P. and M.R.C.S.; the physicians should be M.B. and M.R.C.P.; the surgeon B.S. and F.R.C.S.; the consulting physician M.D. and F.R.C.P.; and the consulting surgeon M.S. and F.R.C.S.

In the event of the one-portal system being established, all candidates for admission into the profession should pass the examinations of the Conjoint Board, and receive a certificate from this board, signifying that they are practitioners of medicine; but before registering as such they must attach themselves to the Colleges of Physicians and Surgeons, and thus become L.R.C.P. and M.R.C.S. When a candidate proposes to practise as physician or surgeon, he will, of course, proceed to take the higher qualifications, with which, however, the Conjoint Board need not interfere, for every successful candidate will have exhibited sufficient professional knowledge and ability before the Conjoint Board at the commencement of his career.

The general practitioner, as heretofore, would practise all branches of the profession, and, when necessary, should call in the aid of members of the second grade, who would be physicians and surgeons practising medicine and surgery respectively, and prescribing for their patients only. The members of the third grade to be men of experience and standing, and should be called in by a physician or surgeon in the same way as a Q.C. is engaged by a member of the outer bar.

A word with regard to the title "Doctor." By referring to Walker's Dictionary, a doctor is defined as a "Physician, one who undertakes the cure of diseases." I believe all Fellows, Members, and Licentiates of a College of Physicians are considered to be physicians by virtue of their diplomas, and I think as a matter of common courtesy they should be allowed to use the prefix "Dr." or "Doctor." Surgeons and apothecaries we know have not the slightest claim to such designation.

If a puisne judge in this country is addressed as My Lord or Your Lordship, and a Scotch judge calls himself Lord So-and-So, neither of them being peers of the realm, surely it will not injure the status of graduates, whom you say are none the less distinguished by having their titles placed after their names, if physicians were allowed the courtesy title of Dr. or Doctor before their names.

I am, Sir, yours faithfully,

Sept. 2nd, 1879. A SURGEON.

CÆSAREAN SECTION.

To the Editor of THE LANCET.

SIR,—I forward notes of a case of Cæsarean section. The frightful risks attending an operation under circumstances detailed therein are, I think, worthy of being known, and for this reason you may perhaps insert the case. It has fallen to my lot to have performed Cæsarean section twice, but should a third case offer I should follow the course mentioned in my remarks.

I was called on the morning of August 10th ult. to a case of difficult labour. The patient was a girl, the wife of a native weaver, about sixteen years of age; primipara. She was said to have been in labour for three days, and the pains had entirely ceased for the last ten hours. On examination the head of the fœtus was found to be high up in the pelvis, and tightly jammed. The soft parts were dry and swollen. The head of the fœtus was broken up, and the brain discharged. I made careful inquiries as to whether instruments of any kind had been used, and this was denied. As native practitioners are entirely ignorant of the use of obstetric instruments, I believe the head to have been crushed by the efforts of the uterus. There being no necessity to use the perforator, I inserted the crotchet and made steady traction. This was quite useless, and I therefore directed the woman to be taken to the Civil Hospital, and sent for Surgeon-Major Watling, A.M.D., and Surgeon Simpson, 23 N.L.I. These officers kindly came and gave me their valuable opinion and assistance. After another very careful examination we found the fœtal head hopelessly jammed in the pelvis, which was small, but not deformed. We found it impossible to use any other instrument except the crotchet, and after one more fruitless attempt with this instrument, we came to the conclusion that the last chance of delivery must be Cæsarean section. The permission having been obtained, I lost no time in carrying out the operation. The woman was placed in a half sitting position, and I made an incision a little above the umbilicus to within about two inches of the pubes. The abdominal cavity was opened without any trouble, with the exception of avoiding the urinary bladder, which, although carefully emptied with a catheter before the operation, was still above the pubis. On the first incision into the walls of the uterus, which was made well away from the fundus, a uterine vessel as large as a tibial artery bled profusely. After vainly trying to secure this vessel, I cut boldly into the uterus, and rapidly extracted the fœtus and placenta. All bleeding ceased whilst the child was being removed. Immediately on their extraction the most appalling hæmorrhage set in from the uterine walls. Surgeon-Major Watling promptly grasped the uterus and abdominal walls; but though exerting strong pressure, the blood welled up between his fingers. The very violence of the torrent arrested its course. Had it continued a few seconds more the woman must have died on the spot. As it was impossible to relax the pressure even for a moment, the abdominal cavity could not be sponged out, nor the wound in the uterus united. The wound in the abdomen was hastily united with sutures, and a pad firmly bound down over the incision and uterus. The hæmorrhage was entirely controlled. This had evidently come from the divided vessels of the walls, and not from the placental attachment. I passed my fingers into the uterus, and no blood flowed from the vagina. On the conclusion of the operation the pulse, which was previously strong and rapid, dwindled down to a thread, but quite perceptible. The operation was completed by 12 A.M. The woman passed a restless night, and became somewhat delirious. There was no apparent pain, and she died without suffering at 12 A.M., twenty-four hours after the operation.

Under such untoward circumstances the issue of the operation was necessarily fatal. A few months previously I had assisted at another Cæsarean section. In this case there was no bleeding, the uterus contracting on its vessels in a perfect and beautiful manner. I must confess I was quite unprepared for such frightful hæmorrhage. I had previously determined to administer a full dose of ergot; but in making the necessary preparations I quite forgot to do so. But I very much doubt whether the womb would have responded to any stimulus. Should I be again so unfortunate as to be called upon to operate on a woman under similar circumstances I should most certainly choose laparo-elytrotomy to an operation which, in addition to the inevitable risk of opening the abdominal cavity, is combined with that which I can only compare to amputating a thigh without a tourniquet.

Your obedient servant,

Ahmednuggur, August 12, 1879. E. COLSON, Surgeon, Bombay Army.

THE ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—How correctly the state of the Army Medical Department is described by the term "Breakdown," used as the heading for a letter in your pages on Saturday last, can scarcely be realised by those who have not recently had something to do with its duties. Probably no such marked example of the utter collapse of a great army department from inanition has occurred since modern civilisation gave organised departments to armies.

The overworked officers who remain in it have been carrying on their thankless duties as best they may, hoping against hope, since the War-Office Committee gave in their report. A Royal Warrant, which was at any rate to bring relief to their difficulties, has been dancing like an *ignis fatuus* before their eyes. But if the report mentioned by your correspondent be correct, it will only lead them into

a "slough of despond," into a more dismal swamp than ever. The evil effects of the present state of this department are too obvious at home and abroad.

As regards the East, they can be guessed at from Surgeon-Major Porter's observations—an extract of which you give—as well as from the latest telegraphic news, showing the paucity of medical officers with the forces on service. As it affected the troops in Natal, it is only necessary to consider that they went on active service in a fever-stricken country with a proportion of less than one medical officer to a battalion—i.e., with less than a third of the *personnel* considered necessary under ordinary circumstances in times of peace in India.

As to home service, which has been reduced to two years and a few months, short as it is compared with the long years spent in exile, it has become now-a-days, to many officers, so utterly unendurable that they embrace the earliest opportunity of returning to India, to escape from it, fortunate, indeed, if they get to India instead of to one of the still more trying stations in which they might have to serve.

Leave has now become a thing to dream of in the distant future, when the worn-out old army surgeon shall have given all to the State that can be got out of him, and when he may be at length in a position to give himself leave without reference to a P. M. O.

However zealous the army doctor of the present day may be—and, Heaven knows, the treatment he receives does not give much occasion for zeal—it stands to reason that the British soldier is likely to have less of scientific skill than the country intends he shall have. There is a limit to the number of cases a medical officer can treat with satisfaction to himself, or with full justice to his patients. It only needs inquiry at some of our larger stations to find that the limit is constantly being far exceeded.

At some stations, in addition, the weary round of orderly duty, for juniors and seniors alike, is another index that the army surgeon has fallen upon evil times. If the warrant has fallen through on the paltry score of expense—for paltry it is compared with the great interests involved—*quousque tandem* is the next consideration.

A department consisting chiefly of *soi-disant* field-officers—save the mark!—rapidly diminishing in numbers, and not being replenished, must come to a standstill some time. That the date can be no distant one the signs are sufficiently clear. The profession outside has hitherto stood true to us, and will, no doubt, do so still. If the Treasury has decided that the country cannot afford the best of skilful treatment for its sick and wounded soldiers, the Government will perhaps find that even the youngest members of our noble profession have come to know that, while Great Britain has colonies and big merchant ships requiring surgeons, they ought to do better, and could scarcely do worse, in choosing a career, than accept, even as a gift and free from competition, the once highly-prized commission of an

September 22nd, 1879. ARMY SURGEON.

EXTIRPATION OF GOITRE.

To the Editor of THE LANCET.

SIR,—An Italian lady has sent me the enclosed, with a request that I should get it inserted in THE LANCET if possible. The case seems of some interest, as I have not read of any one before in which the contents of the thyroid tumour were emptied out, and the sac removed afterwards.

I am, Sir, yours faithfully,

Wimpole-street, Sept. 15th, 1879. MARCUS BECK.

EXTIRPATION OF GOITRE; CURE.

BY DR. DIONISIO.

A young lady, twenty-five years old, had been troubled for some years with a tumour in the thyroid region, which had acquired the size of a fist, or rather of a common orange. She experienced great difficulty in breathing, especially after the least exertion. Swallowing was difficult, and even painful at times. Harsh tracheal breathing; instant sensation of suffocation by the least pressure on the tumour.

Having ascertained it to be a parenchymatous goitre, already undergoing colloid metamorphosis, Dr. Dionisio proceeded to its extirpation in the following manner:—First, he made a cutaneous incision in the middle line, from the inferior border of the cricoid cartilage to the superior border of the sternum, and divided the other tissues on a director down to the tumour. After drawing the incision widely open with blunt hooks, he proceeded to isolate the tumour on each side and at the back till he reached the adhesions to the trachea, either tearing with his finger or with the director or cutting the bands of fibrous tissue which united the tumour to the adjacent parts. The vessels were cut as the operator went on, between two catgut ligatures, after Lücke's method.

As the tumour was found to be formed by a capsule distended with a soft, elastic substance, but not fluctuating, after having assured himself by a puncture that he had to deal with colloid tissue, Dr. Dionisio opened the capsule from top to bottom, and emptied out its contents with his fingers. The thick velvety-walled sac, of a livid colour, was then pulled from its position and cut away with sharp scissors, so as only to leave the portion adhering to the trachea. After arresting the hæmorrhage, the sides of the capsule were united to the sides of the cutaneous incision in its lower portion, so as to facilitate, by means of a drainage-tube, the escape of the secretions. A few interrupted stitches sufficed to join the incision in its superior portion.

No disagreeable consequences followed the operation. The maximum temperature, and for one single day, was 103·1° F. The patient after a month was quite recovered, and only showed on the place a slight scar, hardly visible.—*Osservatore Gazzetta delle Cliniche di Torino*, No. 28. 1879.

THE HEART COMPLICATIONS OF RHEUMATISM.

To the Editor of THE LANCET.

SIR,—The two factors which play the most important part in the production of these complications are the age of the sufferer and the acuteness of the attack. The younger the patient, and the more acute the seizure, the more likely is the heart to be affected.

If Dr. Finlay and Mr. Lucas could add to their statistical statement published in this day's LANCET some information on these two points (say, the number of patients under twenty in each group), they would much increase the value of their interesting communication. A statement of the day on which medicinal treatment was first omitted would also be of service. I am, Sir, yours, &c.,

T. J. MACLAGAN.

Cadogan-place, Belgrave-square, S.W., Sept. 20th, 1879.

VARIOLA AND VARICELLA: "A HARD CASE."

To the Editor of THE LANCET.

SIR,—With reference to the case of alleged error in diagnosis alluded to in your issue of last Saturday, I beg to inform you that I arrived at my conclusion after two inspections of the sick persons, and consultation with our senior medical officer, who entirely agreed with me. I am still of opinion that the disease was small-pox, and I think that the detention of the patients in the hospital goes to confirm my opinion.—I am, Sir, yours faithfully,

W. A. BONNEY,
Medical Officer, North-West District, Chelsea.

King's-road, Chelsea, S.W., Sept. 24th, 1879.

*** This is confirmatory of our first impression.—ED. L.

A REPUDIATION.

To the Editor of THE LANCET.

SIR,—An untrue report that I profess homœopathy having repeatedly come to my hearing, I should feel obliged if you would allow me, through the columns of THE LANCET, to repeat the denials made in private. Ever since studying medicine I have regarded homœopathy, as a system or separate mode of practice, as a mistake and an anachronism, and this conviction has only been deepened by time. It is not the place here to enter into the question whether homœopathy may not have important legacies for medicine as other erroneous systems have had, but I would distinctly repudiate any connexion with a sectarian medical position.

I am, Sir, yours obediently,

A. WILBERFORCE SMITH.

London, September 22nd, 1879.

NOTES IN NORMANDY.

(By a Loitering Correspondent.)

AT Havre I found the old familiar stinks in the many narrow streets with very lofty houses, which, in spite of the embellishing spirit of the age, still remain to give a wonderful picturesqueness to the old town. They ought to be terribly unhealthy, but somehow there does not seem to be so much illness as might reasonably be expected. However, I am hardly qualified to speak of this, for I did not visit the hospital. But at Caen, where I went next day, a town of 40,000 inhabitants, where the stinks are quite as lively and there are more numerous and still more picturesque old houses, I did contrive to lounge up to the Hôtel Dieu, and a most courteous *interne* took me round. I found here a few, perhaps a dozen, cases of typhoid, almost all in soldiers who had been removed from the barracks. The hospital is continuous with, and, indeed, constructed out of part of the old Abbaye-aux-Dames, founded in the eleventh century by La Reine Mathilde, and you pass from one of the wards straight into a chapel near the choir of the old church dedicated to La Trinité. In this chapel such patients as are able attend the service under the inspection of the *sœurs*, who are themselves concealed by a wooden screen. The nursing is entirely in the hands of the sisters, who are aided, however, in the female wards by women, who scrub and clean and do the rougher work. In the male wards the sisters have the help of *infirmiers* — men employed in a similar way. There would be, I was told, two *sœurs* and two or three *infirmiers* to a ward of forty or fifty beds. It must be remembered that the beds are occupied by a large number of old and chronic cases as well as by those suffering from acute maladies. In the French hospitals a patient only quits the *salle* (1) when he gets well, (2) when he dies, or (3) when he elects to take his discharge; he is not sent away.

It was the time for *déjeûner* in one of the wards, and I saw the distribution of the diets. There was corn-flour soup, veal roasted in some fashion, potatoes sliced and fried, French plums with sugar and juice. Some had only part and some all of this repast.

The nursing of the sick in the French hospitals would appear to be good, but, if I mistake not, it is purchased at a considerable price. It is ecclesiastical to a degree of which we have no conception in England, and the sisters would seem to have all the administrative power in their hands, and to wield it with a despotic conservatism, which scorns to regard the progress of science. Hence we find the little four-post bedsteads with white curtains retained, even in the surgical wards, in utter defiance of the dangers of infection, for the reason of the privacy afforded by them in relation to religious offices.

Caen drains, so far at least as excrement is concerned, into cesspools. I was anxious to know whence the drinking-water, which was being freely consumed at my hotel, was derived, and I asked the landlord, who took the head of the table at dinner and carved for us, at what was a veritable *table d'hôte*, such as one does not very often see now in France. Our *maître* told me that there was a pump in the courtyard which led to an artesian well 300 metres deep. I do not know whether such a good institution as this is common in France, but it is hard to conceive how otherwise a people that drinks enormously of water and lives over cesspools can escape continual typhoid.

At Rouen I found scarcely a case of typhoid in the Hôtel Dieu. In this part of Normandy rheumatism is very rife, and the hospital beds are filled with cases of cardiac disease of this origin. Phthisis also is very common, and Dr. Leudet, who most courteously took me through his wards, showed me many cases of cancer, a larger proportion, it appeared to me, than is usual in English hospitals. Hydatid disease, he said, was comparatively rare, and, oddly enough, he met with very many more cases of tænia in his private than in his hospital practice.

The visit at these hospitals, as, indeed, I think is universally the case in France, is made at 8 A.M.—a convenient arrangement if one adopts the French custom of a *café au lait* at 7 and *déjeûner* about 10.30. It being holiday time and fine weather, your correspondent was glad to lounge over his breakfast of oysters, *omelette aux fines herbes*, a *cotelette*, a pear, and some gruyère, and to smoke his cigarette afterwards at a little marble table, amidst a number of gentlemen in black broadcloth and very white linen, who were doing the like, and who seemed to have nothing in the world to do but this. There is no doubt that this lounging in cafés at the time of day when in England men are most of all engaged, is one of the French customs which chiefly strikes a visitor.

WOLVERHAMPTON.

(From our own Correspondent.)

LAST year it was determined to commemorate the first day of the *annus medicus* by a professional dinner. The experiment was successful, and it is to be repeated. Already the acceptances are numerous, and there is every prospect that the gathering will be unusually large, as well as representative. The Wolverhampton and District Medical Society reassembles next month for the commencement of its second session. Dr. Gowers, of London, will deliver an inaugural address.

Some additions of importance have lately been effected at the hospital. The laundry—a recent and detached erection—has been fitted up, from the plans and under the supervision of T. Bradford and Co., Manchester; the result is highly satisfactory, and is a sufficient reward for the rather large cash outlay. To the children's department an extra room, previously used for another purpose, and now containing six cots, has been added. The new ward, which is devoted to acute medical cases, is much appreciated.

The Weekly Board has been considering plans for the erection of a new mortuary, with post-mortem, dissecting, and pathological rooms, but at present no final decision has been arrived at.

Medical News.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Sept. 18th:—

Torbitt, Charles, Oldbury, Worcestershire.

The following gentlemen on the same day passed the Primary Professional Examination:—

Thomas G. Munyard, Westminster Hospital; Zachariah Prentice, Guy's Hospital.

At the Preliminary Examination in Arts held at the Hall on Sept. 19th and 20th, the following passed and received certificates of proficiency in General Education:—

FIRST CLASS (in order of merit).—1st: H. Armstrong and L. Pickering. 3rd: J. H. Menzies. 4th: A. W. Clark, S. Herbert, G. R. Hulbert, and Florence J. Tebb. 8th: F. Bromhead, H. G. Haines, R. T. Westbrook, T. D. White, and W. S. R. Woodforde. 13th: H. A. Des Vœux, C. S. Robinson, and H. H. Tomkins.

SECOND CLASS (in alphabetical order).—G. G. Adams, T. E. Adams, R. H. J. Allen, S. G. Allen, A. B. Avarne, W. G. Axford, G. L. Baker, R. H. Bates, C. E. Bean, W. H. Bell, C. N. Bensley, A. Blakiston, J. F. Boissiere, J. A. Bradbury, E. M. Brown, C. S. Browning, L. W. Burton, H. D. Buss, A. K. A. Cæsar, J. C. Cater, P. E. Cleaver, J. W. Cockerill, J. W. Cook, E. R. M. C. R. Cousins, J. J. G. Crang, Mary Crawley, T. W. Crook, J. G. D'Aguiar, J. W. Dawes, C. Dolman, J. O. Downes, J. B. Drew, F. B. L. Ensor, A. P. Feddon, H. Fitton, S. H. Fox, E. S. Fry, G. F. Gilbert, J. Good, O. B. Granville, H. W. Haydon, H. H. Hewitt, C. E. Humphryes, C. R. Huxley, A. E. Huxtable, F. J. Jaynes, Mary A. Kenealy, H. R. Kenwood, C. J. Kitkpatrick, W. E. Lowe, Mary M'George, J. H. M'Rice, J. T. R. Maddox, R. Mills, C. E. Morris, Margaret Morice, A. G. Momber, J. I. Parsons, A. M. Page, D. E. Phillips, T. Pitman, H. Potter, A. I. Richards, W. B. K. Richards, W. S. Richmond, L. Roberts, A. M. Ross, P. C. H. Ryan, F. O. Smith, Augusta Stolte, R. Swyer, W. E. Swyer, W. S. Tebb, A. H. Tenison, M. Thompson, J. Thorpe, A. F. Tidswell, Jane H. Walker, G. J. Walklett, D. H. R. Walwyn, H. E. Watts, T. Young.

COLLEGE OF PHYSICIANS IN IRELAND. — At a special examination held last week the undermentioned gentleman obtained the licence in Medicine of the College:

Thomas Beattie Moffitt.

BY Dr. Sedgwick Saunders' report to the Commissioners of Sewers on Tuesday it appears that during the fortnight ending the 20th inst. seven and a half tons of meat had been condemned in the City as unfit for human consumption, and nearly three tons of putrid bacon, hams, and tongues, stated to have been sold to a soap-boiler, had been seized.

ROYAL COLLEGE OF SURGEONS.—At the recent preliminary examination for the diplomas of membership and fellowship 431 candidates presented themselves—viz., 294 for the membership and 137 for the fellowship.

AT the Central Criminal Court on Tuesday, Francis James Hammond was found guilty of performing an operation for a criminal purpose upon a young woman who had been living with him as his wife. He was sentenced to ten years' penal servitude.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The thirty-sixth annual meeting of the above Society was held on the evening of the 18th inst., when the office-bearers for the ensuing session were elected. They are as follows:—President: John Niven, L.R.C.S. Vice-president: T. F. Gilmour, L.R.C.P.E. Treasurer: Ed. M'Millan, L.R.C.S.E. Secretary: Andrew J. Hall, M.D. Editorial Secretary: Alex. Napier, M.D. Seal-keeper: Wm. Macfarlane, M.D. Court Medical: Peter Steward, M.D. (convener), R. W. Forrest, M.D., Jas. Dunlop, M.D., Jas. Morton, M.D., J. S. Nairne, L.F.P.S.G.

BOOKS ETC. RECEIVED.

CHAPMAN & HALL, London.
Farming for Pleasure and Profit. By Arthur Roland. (Second Section: Poultry-keeping.)

J. & A. CHURCHILL, London.
Clinical Medicine. By Dr. A. Flint.
A Treatise on Vocal Physiology and Hygiene. By G. Holmes.
The Bath Waters. By Dr. J. Tunstall. Revised and in part Re-written by Dr. R. Carter.
Essays on Ophthalmology. By G. E. Walker.
Observations on Contraction of the Fingers. By W. Adams.

FIELD & TUER, London.
Luxurious Bathing. A Sketch by A. W. Tuer.

HOULSTON & SONS, London.
How the Lady-Help Taught Girls to Cook and be Useful. By Mrs. Warren.

LONGMANS, GREEN, & CO., London.
Foreign Work and English Wages. By T. Brassey, M.P.
San Remo and the Western Riviera. By Dr. A. H. Hassall.
Wintering in the Riviera, with Notes of Travel in Italy and France. By W. Miller.

MACLACHLAN & STEWART, Edinburgh.
A Manual of the Operations of Surgery. By J. Bell.

J. MACLEHOSE, Glasgow.
Lectures on the Theory and General Prevention and Control of Infectious Diseases. By Dr. J. B. Russell.

MAY & CO., London.
British and Irish Press Guide. 1879.

F. NORGATE, London.
Longevity of Man. By W. J. Thoms.

SMITH, ELDER, & CO., London.
Deaths in Childbed. By Dr. Æneas Munro.
Ocular Therapeutics. By L. De Wecker.

TRÜBNER & CO., London.
Colour-blindness, its Dangers and its Detection. By Dr. J. Jeffries.

W. WOOD & CO., New York.
A Treatise on Hygiene and Public Health. By Dr. A. H. Buck. Vols. I. & II.
Transactions of the Medical Society of the State of New York for the Year 1879.

A Few Remarks upon the Various Uses to which Electricity can be Practically turned to Account in the House &c. By F. Flower. (Skipper & East.)—Exceptional Longevity. By W. J. Thoms. (F. Norgate.)—The Gentleman's Magazine; September. (Chatto & Windus.)—Phrenology Vindicated. By A. L. Vago. (Simpkin, Marshall, & Co.)—The Journal of the Scottish Meteorological Society. Nos. LVII., LVIII., LIX. (W. Blackwood & Sons, Edinburgh.)—The Chess-Monthly; September. (Dean & Son.)—Two Lectures on Ringworm. By J. Startin. (Baillière, Tindall, & Cox.)—Om Spetelska. By Dr. F. Eklund. (A. L. Norman, Stockholm.)—Remarks on Ovariotomy. By Dr. N. Bozeman. (W. Wood & Co., New York.)—Traité de Corps Etrangers et Chirurgie. By Dr. A. Poulet. (Mr. O. Doin, Paris.)—The Nautical Magazine; September. (Simpkin, Marshall, & Co.)—The Russian Vapour Bath in Acute and Chronic Disease. By Dr. J. B. Gill. (Field & Tuer.)—Murray's Time-table Diaries. (Murray & Co.)—The Weather and Climate Changes. By Observator. (F. E. Longley.)—The Extirpation of the Bones of the Nose and Mouth by the Use of the Surgical Engine. By Dr. D. H. Goodwillie. (W. Wood & Co., New York.)—Health Lectures for the People. Delivered in Manchester 1878-79. Vol. II. (F. Heywood.)—Chemical Notes and Equations for the Use of Students By R. Milne Murray, M.B. (Maclachlan & Stewart, Edinburgh.)—Contributions à la Chirurgie des Voies Urinaires. By Dr. F. G. Guillon. (Baillière et Fils, Paris.)—The Publication of Evidence in Divorce and Criminal Trials. By F. J. Munby. (Spottiswoode & Co.)—Archives of Dermatology; July. (J. B. Lippincott & Co., London.)—The American Journal of Otology; July. (W. Wood & Co., New York.)—An Atlas of Human Anatomy. By R. J. Godlee. Part X. (J. & A. Churchill.)—The New Sydenham Society's Lexicon of Medicine and the Allied Sciences. By H. Power, M.B., and Dr. L. W. Sedgwick.—The Boy's Own Paper. Part VII. The Leisure Hour; September. Sunday at Home; September. (The Religious Tract Society.)—The County Brewer's Gazette; July.—The Middlesex Hospital Reports of the Medical and Surgical Registrars for the Year 1877. (J. Smith & Co.)—The Contemporary Review; September. (Strahan & Co.)—The Sunday Magazine; September. Good Words; September. (Isbister & Co.)—Prayers for Daily Use. (Hamilton, Adams, & Co.)—Fraser's Magazine; September. (Longmans, Green, & Co.)—The Magazine of Art; September. (Cassell, Petter, & Co.)—Atlas of Histology. Part VIII. By Dr. Klein and E. N. Smith. (Smith, Elder, & Co.)—Paralysie Agitante. By P. de Saint-Léger. (Baillière et Fils, Paris.)—Il Clima de Catania. By D. G. B. Ughetti.—Mr. Gladstone on Gardening. More Food at less Cost. By L. H. Grindon. (E. Lever.)—The Yellow Fever Germ on Coast and Inland. By Dr. H. F. Campbell. (Harrison & Co., Georgia, Rome.)—Matrobiotit und Eubanik. By W. Schmole.—De Meningite Cérébrale Aigue. By Dr. M. Lubbock. (A. Parent, Paris.)—How to bring up Babies. By H. Wilcox. (Burgess & Co., London.)—Manual of Practical Anatomy. By Dr. J. Cossar-Ewart. (Smith, Elder, & Co.)—Nouveau Dictionnaire de Médecine et de Chirurgie. (Baillière et Fils, Paris.)

Medical Appointments.

ADAMS, J. E., F.R.C.S.E., has been appointed a Surgeon to the In-patients, London Hospital.

BARNES, J. J. F., L.R.C.P.Ed. & L.M., L.R.C.S.Ed., L.S.A.L., has been appointed House-Surgeon to the Torbay Hospital and Provident Dispensary, Torquay, vice Marsh, resigned.

BENTHALL, W., M.R.C.S.E., has been appointed a Resident Clinical Assistant to the East London Hospital for Children, vice Leatham, resigned.

BUTLER, J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Long Eaton Urban Sanitary District, at £40 for one year.

CAMPBELL, A., M.B. & C.M., has been appointed Examining Surgeon for the Great Northern Railway Engineers Department Plate-layer's and Workman's Provident Fund on the Nottingham and Derbyshire Extensions and the Leicestershire Joint Lines District.

CARLISLE, J., L.F.P.S.G. & L.M., has been appointed Certifying Factory Surgeon for the District of Crossgar, co. Down.

CROOKE, G. F., M.R.C.S.E., L.S.A.L., has been appointed Senior House-Physician to Guy's Hospital for October, and afterwards House-Physician to the Seamen's Hospital, Greenwich.

DAWSON, C., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Superintendent of the Leeds Union Infirmary, and Medical Officer to the Workhouse and Industrial Schools, vice Hamilton, resigned.

FULLER, L. H., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon and Secretary to the Royal Hants County Hospital, Winchester, vice Sedgefield, resigned.

HAY, R. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Portlock District of the Williton Union, Somersetshire, vice North, deceased.

HEATH, H. T., L.R.C.P.Ed., L.R.C.S.I., L.A.H.D., has been appointed Medical Officer of Health for the Mansfield-Woodhouse Urban Sanitary District, at £5 5s. per annum, vice Beevor, deceased.

HEWETT, A., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Resident House-Surgeon to the Western Branch of the Brighton and Hove Dispensary, vice Upton, resigned.

HUGHES, W. L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 1 District and the Workhouse of the Carmarthen Union, vice Rees, resigned.

LENTAIGNE, J. V., L.R.C.S.I., has been appointed Resident Surgeon to the Richmond Hospital, Dublin, vice Martyn, whose term of office has expired.

LUNDY, L. F., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Staines Rural Sanitary District, at £75 per annum, until August 11th, 1880.

MURRAY, A. D., M.B., C.M., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the No. 2 Division of the Rickmansworth District of the Watford Union, vice Henderson, resigned.

MURRAY, C. F., M.D., C.M., has been appointed Medical Attendant to the Royal Irish Constabulary, Stations Nos. I. and II., Gweedore, Letterkenny, co. Donegal; also Surgeon and Agent to the Coast Guard stationed at Bombeg, co. Donegal, both vice Bleakley.

ROBERTS, A., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Bingley Local Board Urban Sanitary Authority, Yorkshire, at £40 for one year.

SCOTT, R. J. H., M.R.C.S.E., has been appointed House-Surgeon to the Royal United Hospital, Bath, vice Willes, whose appointment has expired.

TAYLOR, W. M., M.A., M.R.C.S.E., has been appointed Medical Superintendent of Dunston Lodge Asylum, Gateshead-on-Tyne, vice Ridley, resigned.

TREVES, F., F.R.C.S.E., has been appointed an Assistant-Surgeon to the London Hospital.

TRIMMER, H. B., M.D., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Gamlingay, Cambridgeshire.

TURNER, W., M.B., C.M., has been appointed Resident Physician to the Royal Edinburgh Hospital for Sick Children, vice Macdougall, resigned.

Births, Marriages, and Deaths.

BIRTHS.

DAWSON.—On the 19th inst., at Paris, the wife of Yelverton Dawson, M.D., of a son.

GREIG.—On the 17th inst., at Tay-street, Dundee, the wife of David Greig, M.D., of a daughter.

MANING.—On the 15th inst., at Derby, the widow of Herbert Stanley Maning, L.F.P.S.G., of a daughter.

MURRAY.—On the 30th July, at Hong-Kong, the wife of Surgeon-Major J. Murray, Army Medical Department, of a son.

PEARSON.—On the 10th inst., at Upper Phillimore-place, Kensington, the wife of David R. Pearson, M.D., of a daughter.

SLOAN.—On the 21st inst., at Newton-terrace, Glasgow, the wife of Samuel Sloan, M.D., of a daughter.

MARRIAGES.

BRUNTON—STOPFORD.—On the 20th inst., at St. Peter's Church, Dublin, by the Venerable C. P. Reichel, D.D., Archdeacon of Meath, assisted by the Rev. J. F. Bickerdike, Thomas Lauder Brunton, M.D., F.R.S., London, to Louisa Jane, youngest daughter of the late Venerable Edward Adderley Stopford, LL.D., Archdeacon of Meath.

CLARKE—HARDING.—On the 18th inst., at the Church of Our Lady, Grove-road, St. John's-wood, by the Rev. G. Taylor, M.R., Reginald Clarke, M.R.C.S., of South Lodge, Lee park, Blackheath, eldest son of Joseph Clarke, of Craven-hill, Hyde-park, to Mary Adelaide, only child of the late J. J. Harding, of Wickridge, Ashburton, South Devon.

NICHOLLS—HINGSTON.—On the 23rd inst., at Shirley Church, Croydon, by the Rev. A. W. Jephson, M.A., Frederick Nicholls, M.R.C.S.E., of Toronto Cottage, South Croydon, to Elizabeth Parnell Hingston, daughter of C. Hingston, Esq., of the Pentlands, Croydon. No cards.

DEATHS.

BARTHOLOMEW.—On the 20th inst., at Grassmount, Forest-hill, E. C. Edith Annie Bartholomew, widow of Charles Eugene Bartholomew, and third daughter of Arthur Brisley Rye, F.R.C.S., of The Grotto, Leckhampton, Cheltenham.

BENNETT.—On the 3rd inst., at Leatherhead, William Bennett, M.R.C.S.E., aged 69.

DANN.—On the 4th ult., on board the s.s. *Kashgar*, Henry T. Dann, M.R.C.S.E., Surgeon-Major, Bombay Service, aged 44.

GAYE.—On the 8th inst., at Newton Abbot, Charles Gaye, M.R.C.S.E., aged 84.

HENDERSON.—On the 9th inst., at Ferryhill, Alexander Henderson, Surgeon.

KELLY.—On the 3rd inst., in the massacre at Cabul, Ambrose Hamilton Kelly, L.K.Q.C.P.I., Medical Officer to the British Embassy.

OGILVIE.—On the 21st inst., at Walmer, John Forbes Ogilvie, M.D., of Norwood.

WICKHAM.—On the 20th inst., at Holloway-road, Edward Wickham, M.R.C.S.E., aged 84.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

MEDICAL ADVERTISING.

SCARCELY a week passes without our receiving communications from medical men who are annoyed by the paltry and unprofessional devices to which some of their neighbours resort to obtain public notice and "patronage." This word we use advisedly, because clearly a medical man whose settling or commencing in a locality is heralded by a newspaper paragraph—however mysteriously inserted—takes the position of a "handy man" or small tradesman who solicits patronage, and ought to be treated as such. The pretence that these complimentary paragraphs are inserted without any underhand effort is ridiculous, and cannot possibly impose on the well-informed. Such laudation is not bestowed on men who conduct their business in accordance with the rules of etiquette. Our waste-paper basket is also unhappily the receptacle for many handbills issued by practitioners who advertise *themselves* under cover of announcing the opening of dispensaries on the "provident" principle. It is obvious that we cannot specifically name or notice the doers of these nefarious deeds, and correspondents who send us papers and information of the class indicated must not take it amiss if we do not refer to them in these columns. The doings of the scum of the profession are infinitely distasteful as topics of remark. Let it suffice to say, once for all, that the men who do these things should be simply scouted by respectable members of the profession. The public will in the long run possibly discover that the persons and the commodity that need so much advertising cannot be of great value or repute.

M.R.C.S., L.S.A.—Our correspondent would do well to address his suggestion privately to the gentleman in question.

Dr. Edmund Guynn will find the announcement in our last number.

DUBLIN SEWERAGE AND DRAINAGE.

THE Commissioners appointed to institute an inquiry into the present system of sewerage and drainage of Dublin, so far as its sanitary condition is affected, will commence their labours on the 30th instant. The state of the river Liffey will also be under consideration as to whether it is prejudicial to the public health. Dublin, our readers are aware, has long possessed an unenviable notoriety for its excessive mortality, and we trust that the important investigation now presided over by the two competent Commissioners will result in clearly demonstrating the principal causes of that undue mortality, and the most effective measures to be adopted for counteracting it.

Mr. Scholefield.—Possibly in the *Progrès Médicale*.

TINEA BARBÆ.

To the Editor of THE LANCET.

SIR,—In an interesting paper on "Tinea Barbæ, the so-called Parasitic Sycosis," published by my friend, Dr. W. Allan Jamieson, in THE LANCET of August 30th, he remarks: "Writers on cutaneous diseases are almost unanimous in the opinion that ringworm of the beard is an exceedingly rare affection in England and Germany, though more common in France." And then he adds: "Three well-marked examples having come under my care during the last few months have led me to think that it is, perhaps, after all, not of so very infrequent occurrence in Scotland, though from special circumstances the recognition of its parasitic nature is not always easy."

My own experience fully bears out Dr. Jamieson's supposition. For I find that out of 1000 consecutive cases of skin disease treated by me in private, there were 6 of parasitic sycosis; while at the Dispensary for Skin Diseases during the last three years the following were the statistics:—1877: Of 1178 cases, 14 of tinea sycosis, and 2 of tinea circinata (ringworm of the body) complicating tinea sycosis. 1878: Of 1421 cases, 16 of tinea sycosis, and 2 of tinea circinata complicating tinea sycosis. 1879: Of 1130 cases, 12 of tinea sycosis. And if we combine these statistics, we find that amongst 4729 cases of skin disease, there were 48 of tinea sycosis, and 4 of sycosis complicated with tinea circinata. It will thus be seen that ringworm of the beard is by no means the rare disease in Scotland which many suppose, although its true nature is often overlooked; and I am inclined to think that its greater frequency in some countries than in others depends, in great measure, upon the habits of the people, and especially upon whether they shave themselves or go to the barber's for the purpose, thus exposing themselves to the risk of infection. At least I can say—what has been remarked by Dr. Jamieson with regard to the three cases he has published—that almost every case which I have met with has been traced (generally by the patient himself) to the barber's shop; and in the exceptional instances in which such a source was excluded, it was generally found to have been contracted from children suffering from ringworm of the head or body, or from domestic animals affected with ringworm.

I am inclined to think that the cause of the higher grade of inflammation generally met with in tinea sycosis, as distinguished from ringworm of the head, is to be found, not so much in the "excess of mycelium over spores in tinea barbæ," as suggested by Dr. Jamieson, as to the greater amount of loose cellular tissue in, and the greater sensitiveness of, the chin. But I quite agree with him in the opinion that epilation is the *sine qua non* in its treatment, and that soothing applications are sometimes necessary, although the cure is much accelerated by the use of parasiticides, such as a solution of perchloride of mercury (two grains in one ounce of water), when the acute inflammation has passed off.

Yours &c.,
T. MCCALL ANDERSON,
Professor of Clinical Medicine, University of Glasgow.

Glasgow, September, 1879.

M.D., (Kingston.)—We think not. On the contrary, a correspondent of one of the American medical journals has recently stated that in Spain leprosy is rather on the increase.

L.R.C.P.—The suggestion seems to us neither practicable nor commendable.

BLOODLETTING.

To the Editor of THE LANCET.

SIR,—I have carefully read Professor Jones's lecture on the above subject in THE LANCET of November, 1877, and beg to inform your readers that the facts therein stated are really based on experience. My own observations and those of other native physicians here lead me to concur with the opinion of Dr. Jones, and I assuredly believe if this system of treatment is adopted in Europe, those gentlemen who prohibit the use of the lancet will have no reason to deny its beneficial effects.

In order to gather public opinions of the physicians of this peninsula, I circulated the substance of Professor Jones's lecture through widely-circulated vernacular journals, and from all sides I hear of its immediate and beneficial results. The danger of weakness, which prevents European doctors from abstracting blood, is of no weight while compared with its advantages, as Europeans generally have a more vigorous constitution than the Indian natives. In pleurisy, pneumonia, encephalitis, and other inflammatory complaints, I have found this process almost invaluable, and consequently suggest the introduction of this useful mode of treating, and trust (after trial) it will be found to be as useful as it is now fancied dangerous.

I am, Sir, yours &c.,
Lahore, May 20th, 1879. HAKIM HAFIZ FAKHARUDDEEN.

PROFESSIONAL JEALOUSY: FOREIGN, COLONIAL, AND HOME.

Justitia.—A letter with this heading has been sent to us, which is far too diffuse for insertion, and the object of which is by no means clear. The author appears to think that the English diplomas of the present day have an undue and an unjust preponderance over those of the sister kingdoms and of the colonies, and displays considerable jealousy in setting forth this opinion. But Falstaff's remark about the sack would seem to apply to this letter, and we commend to the attention of the writer the sayings and doings of the Medical Council in their at present futile endeavours to establish a conjoint scheme.

X. K.—The system of instruction for deaf mutes is in use at most of the asylums, public and private, around London. The names and addresses can be found in the Medical Directory.

Mr. James.—Refer to E. Trimmer, Esq., College of Surgeons.

TREATMENT OF CHOLERA BY THE HYPODERMIC INJECTION OF MORPHIA.

To the Editor of THE LANCET.

SIR,—The letter of Dr. Mehta in your issue of August 23rd, page 296, on the above subject, stimulates me to record my experience of this method in the treatment of ordinary choleraic diarrhœa. I have now followed this treatment as a part of my ordinary therapeutic routine for about three years, and have never found it fail in a single instance. A good many times during that period I have been called to people who, after vomiting and purging a various time, have been cold, livid, voiceless, almost pulseless, with blue lips and glassy eyes, cramped all over, and with the watery dejections running almost constantly involuntarily from them. I have given a hypodermic injection of half a grain of morphia, and in ten minutes the purging has ceased entirely, and recovery has ensued. Often purging is instantly stopped, not a single evacuation occurring after injection. At the utmost there will not be above one or two, which will occur in the ten minutes following. To the patient the change wrought in his condition seems nothing short of miraculous, and I say deliberately that in the whole range of medicine there is no one deed so gratifying to both patient and practitioner as the administration of a hypodermic injection of morphia in choleraic diarrhœa. The vomiting often persists for twenty-four hours or so afterwards, but may be safely left to subside of itself, as all the danger is due to the purging. Several of my patients have been aged, but have recovered quite as well, though more slowly, than the others. Of course, when sufferers are as bad as I have described, convalescence may be more or less protracted, and the reaction stage may be attended by fever &c.; but this entirely depends upon the length of time a case has been allowed to run before the patient comes under treatment. Suppression of urine has occurred in some of my cases for two or three days, and the first passed has contained a considerable amount of albumen, but so far this has not interfered with the uniformly good result. It is very easy to understand why all medicines by the mouth so completely fail in bad choleraic cases; for the medicine is either immediately vomited, or passes through the patient almost as fast as if poured through a funnel. I have given a dose of bright-yellow chalk mixture with opium, and the yellow colour has appeared in the stools in two or three minutes, which have also distinctly smelt of it. Pills pass through very nearly as fast, and I have seen them pass as such even when made with new extract of roses. In fact, the whole intestinal canal is actively engaged in secretion, and its other power of absorption seems completely in abeyance. Every now and then the practitioner will meet with a case where, after having given a hypodermic injection of morphia, the purging returns in a few hours. He may safely affirm in a case of this kind that the disease will turn out to be dysentery, though at the time the motions may be copious, pale, and watery, and not present the least resemblance to the usual discharges of dysentery. They will with certainty ultimately assume the dysenteric character, and other remedies may be at once tried, as opium and morphia possess no curative power over dysentery. It may be mentioned that the injection of as much as half a grain of morphia in choleraic diarrhœa is hardly ever followed by sleep, but a sensation of indescribable comfort and ease soon diffuses itself over the patient. As a rule, unless the patient be in a really critical state, a quarter to a third of a grain is ample; but if he is cramped, and signs of collapse appear, half a grain may be at once given without the least fear.

I will not encroach upon your valuable space with a description of a series of cases of a disease familiar to every practitioner, but merely end this communication by a summary of my conclusions, which are as follows:—

1. Choleraic diarrhœa can always be immediately stopped by the administration of morphia hypodermically.

2. If severe diarrhœa have persisted two hours, in spite of the administration of opium or morphia by the mouth, frequently, the hypodermic injection of morphia should be at once resorted to.

3. If cramps and collapse be present, the purging persisting, no time should be lost in administering morphia subcutaneously in full dose.

4. The treatment is absolutely free from danger, even if temporary suppression of urine or albuminuria be present.

5. Where not curative, the treatment is diagnostic, enabling us to foretell with certainty the advent of dysenteric symptoms.

6. The best preparation of morphia for this and other hypodermic purposes is the sulphate, on account of its smaller liability to undergo change into apomorphia.

I remain, Sir, yours obediently,

Blackpool, Sept. 8th, 1879. WILLIAM HARDMAN.

"PLAYGROUNDS IN LONDON."

WE were glad to see a letter in the *Pall Mall Gazette* recently, urging the expediency of appropriating old and disused churchyards as playgrounds for poor children. The subject is one in which we are much interested, and it certainly deserves the attention of the authorities. No better use could be made of these now waste lands than to devote them to the purposes of innocent enjoyment in the manner proposed.

C. A. B., (Esher.)—The subject has been discussed repeatedly in our columns. If our correspondent will refer to THE LANCET of Jan. 9th and 16th and April 24th, 1875, he will find much information in regard to the affection he mentions.

A Constant Reader.—Leven (Paris, 1879) on Dyspepsia.

TINCTURE OF HAMAMELIS.

To the Editor of THE LANCET.

SIR,—The late correspondence in THE LANCET respecting the tincture and extract of hamamelis (witch hazel) shows that a considerable interest attaches to the medicinal properties of these preparations. A note of the essential distinctions in the chemical composition of the tincture as compared with the extract may be of some value to your readers, and may serve to assist in pointing out the proper application of each. The extract is so remarkable that I have devoted a great deal of attention to its analysis, and I find the difficulties encountered in the endeavour to separate the components have as yet prevented me from being able to announce precisely the quantities of the proximate principles which produce the specific remedial actions now so well recognised throughout America.

I find, as several of your correspondents have mentioned, that the American extract in best repute is that known as "Pond's extract." This is a very curious preparation, and contains a powerful astringent principle, which is either really volatile at a low temperature, or is carried over in distillation by the vapour of water. There is also an extremely diffuse volatile oil and an oleo-resin. I can trace a strong resemblance in a portion of the extractive matter to that of the arnica montana, and I believe I shall confirm the detection of a terebene. The properties are therefore mainly astringent and antiseptic; but I am credibly informed that the extract of witch hazel is largely used as an anodyne. The volatile astringent properties appear specially valuable, as, with the exception of pyro-gallic acid, which is only volatile at a high temperature, I am not aware of any other volatile astringent of nearly the same power. This property may render the extract of hamamelis of peculiar value for inhalation.

The crude extract, such as I have been able to procure in this country, contains a considerable quantity of coarse resin with tannic acid, together with a useless superabundance of caramel, the volatile oil being only sufficient to give the characteristic odour. The tincture retains a larger proportion of volatile oil than is found in the crude extract, but not so much as in "Pond's extract," the astringent principle being mainly gallic acid, which is present in a small proportion.

If I succeed in my more elaborate experiments to determine the exact quantitative composition of these or other preparations of hamamelis, I shall have great pleasure in publishing the results.

I am, Sir, faithfully yours,

H. C. BARTLETT, Ph.D., F.C.S.

Duke-street, Grosvenor-square, Sept. 17th, 1879.

Medicus.—Our advice is that our correspondent should first verify the facts, and then, if satisfied, forward a simple report of the case, with the name, to the Court of Examiners of the Royal College of Surgeons.

Mr. Williams.—The question should be put directly to the medical practitioner ordering the removal indicated.

Mr. F. Marsdin (Eastbourne) will find some useful hints on the subject in THE LANCET of May 26th and June 9th, 1877.

DETACHMENT OF THE SCALP FROM INJURY.

To the Editor of THE LANCET.

SIR,—I have read with interest Mr. Cowell's case of "Complete Removal of the Scalp," recorded in THE LANCET of last week, and consider the successful issue very satisfactory. I had to deal with a somewhat similar accident when junior house-surgeon at the Manchester Royal Infirmary, a few details of which might prove of value.

A factory girl, aged seventeen years, was admitted on August 3rd, 1872, with rather more than the right half of the scalp, together with the right ear, torn off by machinery, the detached part being divided into several large pieces. She reached the infirmary three and a half hours after the injury, having come from a distance of ten miles, and a large amount of blood had been lost. The scalp was stitched together, the ear replaced, and one artery secured, but no union took place; the scalp and ear dried and sloughed away. Her temperature rose to 104°. Drowsiness came on, with symptoms of meningitis, and the patient died, convulsed and comatose, on the thirteenth day, together with left facial palsy.

This case differs from Mr. Cowell's in point of severity, and the scalp, although detached, was not actually separated from the body; but the manner in which the accident happened was similar.

I am, Sir, your obedient servant,

HENRY A. LEDIARD, F.R.C.S.

Cleveland-street, W., Sept. 23rd, 1879.

J. M. P.—The suggestion is not new. The *Bulletin Général de Thérapeutique*, 1879, contains a report of a case of chorea in a girl, aged ten years, under the care of Dr. Dresch, in which he used the salicylate of sodium in the dose of a drachm and a half per diem. At first the medicine was rejected by the stomach, but after two days was tolerated. The exhibition of the medicine was, according to the report, followed by total cessation of the choreic movements and complete recovery in eight days.

Dr. Henry Ashby's communication has been received.

THE LATE SURGEON KELLY OF "THE GUIDES."

To the Editor of THE LANCET.

SIR,—With reference to your sympathetic annotation on this officer, will you allow me to say that I made his acquaintance at Hati-Murdan, the head-quarters of his corps, while in cholera camp in Eusoofzaie, in October, 1876, with a battery of artillery from Peshawur. He and his *confrères* were most kind and hospitable to us, and it is sad to reflect that three of the small party of officers that constituted the staff of this small garrison have since died violent deaths. But they all died in the execution of their duty, under circumstances which will ever command respect, if they have not already become historic; and Colonel Malleson's recent dedication will rescue the memory of one of them—viz., that of the gallant Major Wygram Battye—from oblivion. May we hope that the two others will find an equally fitting memorial in the grateful recollection of their countrymen.

In one of our interviews Mr. Kelly showed me a very interesting collection of calculi, the result of his practice at the local dispensary among the wild inhabitants of the neighbouring Mahomedan states of Sevat and Boneyr, where, as indeed elsewhere on the frontier, calculous disorder largely obtains. He also showed me a rough bullet, or rather a large misshapen slug, which he had extracted from the bladder of one of these, and he added that this had lain for a period of eleven years in the patient's bladder. How it got there, or whether it effected a lodgment in this viscus at the time, could not be determined, but it struck him from behind; and several cases in point are, I think, recorded by Mr. Dixon in the thirty-third volume of the Medico-Chirurgical Transactions. He was fired at with intent in one of those blood-feuds which are so common among the Pathans everywhere in these hills, and, with the usual fatalism or *sang froid* of his race, he made very light of the matter. Noticing the interest I took in it in connexion with some similar specimens I had accumulated myself, or anxious to have it exhibited, as I promised, at one of the Societies, he half-offered to let me have it for that purpose later on. But we parted soon afterwards to meet no more, and it is to be feared that this very interesting "calculus" is now lost; if not, or should it have fallen into the hands of anyone who does not care for such things, will you kindly allow me to solicit, through your pages, the loan or gift of it for incorporation with my own, and by way of commemorating the episode and interview so imperfectly described above.

Your obedient servant,

Warrington, Sept. 23rd, 1879. WM. CURRAN.

A Subscriber.—1. Opium and laudanum are not scheduled as poisons of the first class requiring the most guarded sale, and it is to be regretted that the practice of treating them as drugs which may be sold to any customer is rife in many districts.—2. It would be desirable to draw the attention of the magistrates to any special case of negligence. The practically free sale and extensive lay use of opium is an evil of great magnitude in many parts of the country.

Mr. Bridges.—We cannot recommend a practitioner.

EXPENSES AT NETLEY.

To the Editor of THE LANCET.

SIR,—In your issue of Sept. 6th you inform "Enquirer" that there are "no special expenses at Netley, except providing a suit of uniform." That is hardly correct. Under the present scale of pay—viz., 5*s.* a day,—the expenses at Netley for four months, over and above the pay allowed, would be *at least* £25, probably more. Certainly, from reading the Regulations, one would suppose that a single suit of uniform would be sufficient; but a candidate has to be provided with mess vest, cross-belt, overcoat, &c. &c., making the cost for uniform alone about £25 or £30, so that it would cost him at least £55 to get through Netley. Of course the uniform is good if he passes out. I would strongly advise any intending candidate for either of the three services to procure a small book, entitled "The Public Medical Services: What they are, and what they are not" (published by Lewis, Gower-street; post free, 1*s.* 8*d.*) The writer gives many valuable hints, though he seems to look on the Indian service with rather a jaundiced eye. He also occasionally makes a mistake, as, for instance, in referring to the M.D. of Galway, and in stating that nearly all the Irish medical schools are attached to Universities. However, the book is well worth reading.

Apropos of the long-expected Warrant for the A.M.D. Let intending candidates look closely at the *Indian pay*. It is not at all unlikely that the Government may resort to the same trick as it did when the last Warrant came out—viz., to keep the Indian pay nearly the same as before, while increasing the home pay. Many men on entering do not know that half their service will be foreign, and very probably all their foreign service will be Indian; and men should know, too, that all Indian pay is given in rupees, which are valued at 2*s.* each, though in reality only worth 1*s.* 9*d.*, and they will probably deteriorate more.

Yours &c.,

September, 1879. GALEN.

ENORMOUS VESICAL CALCULUS.

THE *Berliner Klinische Wochenschrift* reports the removal by Langenbeck, of Berlin, of an extraordinarily large calculus from the body of a man who had for many years suffered from urethral stricture. The stone almost filled the bladder, and weighed 600 grammes; it was composed almost wholly of phosphatic layers.

Guyite had better make application at the office of the Crown Agents for the Colonies, Downing-street.

Anglo-Indian.—The title "Doctor" can be lawfully assumed only by the holder of a University degree of M.D.

CASE OF RECOVERY FROM CHLORAL POISONING.

To the Editor of THE LANCET.

SIR,—On June 6th, at 9 A.M., I was called to attend a middle-aged man, said to have taken an overdose of chloral. He lay on his bed quite insensible; pulse extremely feeble, 100; breathing short and rapid; temperature slightly below the normal standard; conjunctivæ unaffected by light and touch; pupils natural; face slightly flushed; no smell in the breath. Close to him was a water-bottle, an empty tumbler, and an empty ounce bottle, labeled "Chloral hydrate." Treatment hypodermic injections of strychnine (one-tenth of a grain) and inhalation of ammonia. In the course of an hour he could be slightly roused, and was able to swallow; the tone of the heart improved. A pint of strong coffee was gradually given, and later on a purge of calomel and jalap; food as he could be got to swallow it. He recovered slowly his consciousness and desire for food.

After four days the patient's mind was clear enough for him to give an account of himself. He had taken the night before I saw him a whole ounce of hydro-chloral dissolved in water, with the direct intention of suicide. The drug was bought the day he took it of a respectable druggist of this town (manufactured by Mallinckrod and Co., St. Louis, and, to the best of my knowledge, pure). It had plenty of time to do its worst, the man having been undisturbed for some eleven hours, and none had been vomited. There is reason to believe that the patient is, or has been, a hard drinker. If so, the tolerance of the chloral may be partly accounted for.

The *National Dispensatory* of Stillé and Maisch (Philadelphia, 1879) states that "sometimes recovery takes place after enormous doses, such as 350 grains" (page 392). In this case the dose was 480 grains.

My friend Dr. M'Kibbin saw the man with me an hour after I was with him. The case is as unique in Dr. M'K.'s experience as in mine.

I am, Sir, yours faithfully,

F. B. HUTCHINSON, L.R.C.P.E., M.R.C.P.E.,
Physician to the Insane Asylum, Honolulu, Sandwich Islands.

June 15th, 1879.

Mr. F. Harrison Tetley.—We think that if the patient of a medical man asks him to meet another local practitioner in consultation, he ought to comply with the wishes of the patient, unless there is some forcible reason to the contrary. To refuse to do so is not indeed to offer a "gratuitous insult" to the gentleman whom one refuses to meet, but is to act in a way which does not show the profession to advantage before the public, and which does not sufficiently recognise the respect due to the feelings of the patient.

Alpha.—Any of the forms may be held to be in good taste. Perhaps the first is the one which we should prefer.

Olim meminisse.—The matter is one of great personal interest, but it is scarcely one that can be dealt with in public.

A CASE OF SPONTANEOUS EVOLUTION.

To the Editor of THE LANCET.

SIR,—The following brief report of a case which occurred in my practice some years ago may be worthy of insertion in THE LANCET.

On the 17th August, 1875, I was requested to visit Mrs. M——, living about ten miles from town, and on my arrival found another medical man, who had been with the patient all night, but was unwilling to proceed with the case without assistance. The patient, a primipara, aged thirty-six, of a strong constitution, had, according to her own statement and that of her friends, been in labour some days. A per vaginam examination detected a shoulder presentation, with the arm prolapsed and quite black, the posterior part of the child lying forwards; the liquor amnii had drained off, and the uterus was so firmly contracted on the fœtus that we could not reach the feet; consequently version could not be performed. As we were satisfied the child was dead, we determined upon evisceration. An opening was made in the thorax; but not having the proper instruments with us, we found we did not make much progress in removing the viscera. A blunt hook was next introduced into the opening, and, on making steady traction upon this, we were gratified to find that the fœtus had descended. We therefore concluded to pursue this plan of treatment, hoping thereby to bring down the whole of the child's body. We continued this method for some time, allowing the patient intervals of rest, and were rewarded for our trouble by finding the abdomen gradually descend, when the case became converted into a breech presentation, and the child was born soon afterwards. The placenta was removed in about half an hour, and the usual bandage applied.

The case progressed favourably, and the patient made a good recovery. The child was a good deal decomposed, and I have no doubt the success of the treatment was due in a great measure to this circumstance.

I remain, Sir, yours &c.,

CHARLES JOHNSTONE, L.R.C.S. Edin.

St. John's, New Brunswick, Sept. 1879.

ATTENTION has been drawn to the fact that the Glasgow Royal Infirmary School of Medicine was not included in the tabular list of the Students' Number. The omission was wholly unintentional. A full notice of the school appeared on pp. 413-14.

PUNCTURING IN ANASARCA.

To the Editor of THE LANCET.

SIR,—I shall be obliged if some of your correspondents will tell me the best way of closing the puncture holes made by using Dr. Southey's fine cannulas for drainage of the legs. In the only two cases in which I have used them, the first cannula introduced has done its work well; but when removed (forty-eight hours seems to be given as the time for one cannula to be left in the same spot), or has shifted out, all the disadvantages of the fluid draining into the bed or stocking (as from a simple puncture) have ensued from the non-closure of the cannula track.

Yours &c.,

September, 1879. ANASARCA.

CLIMATE OF BRUGES.

To the Editor of THE LANCET.

SIR,—Intending residents at Bruges have consulted me on its climate, especially with reference to its effects on chest affections. If any of your readers could inform me on the subject through your columns, I would feel obliged. Yours faithfully,

Ballyfeard, Cork, Sept. 16th, 1879. ENQUIRER.

ERRATUM.—In the notice of the Stafford House Committee's Report, page 428 of our last number, the name of Mr. F. R. Barker was incorrectly printed "Baker."

LETTERS not answered in the current week will be dealt with in the next issue of THE LANCET.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Ramskill, London; Dr. Brown-Séquard, Paris; Dr. B. Yeo; Mr. Bridges, Holloway; Mr. Hough, Oakham; Mr. Hardman, Blackpool; Mr. Hare, Bath; Dr. Maclagan, London; Dr. Cartulis, Alexandria; Mr. Huxtable, Watchet; Dr. Weir, Banbury; Dr. Ashby, Manchester; Mr. Dransfield, Penistone; Mr. Croghan, Dublin; Mr. Goodman, Bangor; Mr. Alsop, Newton Abbot; Mr. Spencer, Rathdrum; Dr. Seguin, Paris; Mr. Walker, Fulbourne; Dr. Lownds, Egham Hill; Mr. Williams, Towyn; Dr. MacCormac, Belfast; Dr. Hall, Glasgow; Mr. T. W. Jones, London; Dr. Delvaille, Bayonne; Dr. Thomas, Glasgow; Mr. Ward, Natal; Dr. Kemble, Redcliffe-on-Trent; Mr. De Lautour, Oamaru, New Zealand; Dr. Seabrook, Glenelg, Australia; Messrs. Evans and Co., Wrexham; Mr. Carte, London; Mr. James, Bermondsey; Messrs. Hauser, Keim, and Co., Chur-Coire; Dr. Curran, Warrington; Dr. Wilberforce Smith, London; Dr. Murray, Letterkenny; Mr. Lawrence, Hemel-Hempstead; Dr. Bacon, London; Mr. Lediard, London; Mr. Howard, Oldham; Mr. Barker, London; Mr. Garnham, Liverpool; Mr. Armstrong, Newcastle-on-Tyne; Dr. Sawyer, Birmingham; Dr. Wood, Camden-town; Mr. Marsdin; Dr. Lewinson, Newcastle-on-Tyne; Mr, Scholefield, Leeds; Mr. Stewart, Portsoy; Dr. Bramwell, Edinburgh; Mr. Stilliard, Birmingham; Dr. J. Williams, London; Mr. Treves, London; Dr. Gwynn, Hampstead; Dr. Anderson, Newcastle-on-Tyne; Dr. Christison, Naini Tal; Mr. Taylor, Gateshead; Mr. W. Williams; Dr. Harding; Mr. Bonney, Chelsea; Dr. Eberle, Easingwold; Mr. Souter, Norwood; The Dean of King's College; Sanitas; M. B.; C. M.; A Subscriber; M.R.C.S., Reading; Vindex; Fiat Justitia; Army Surgeon; Dublin Hospital; X. K.; C. A. B.; T. J. W.; Sigma; A Constant Reader; Anasarca; H. C.; X. Y. Z., West Bromwich; G. P.; E. W. F.; F. G. C.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Buzzard, Bedford; Mr. Mardon, Littlehampton; Dr. Charteris, Dieppe; Dr. Nattrass, Sunderland; The Dowager Lady Antrobus; Mr. Stuart, Wigan; Mr. Williams, Abertillery; Dr. Davies, Moriston; Mr. Tetley, Keighley; Mr. Blythe, Newtown; Dr. Ray, Blackburn; Mr. Nichols, Croydon; Mr. Stedham, Fairham; Mr. G. Brown; Mr. Radcliff, Arcachon; Miss Nelson, Surbiton; Mr. Tighe; Mr. Park, Thornton; Mr. Morgan, Pontrhydygroes; Mr. Solomon, Birmingham; Mr. Long, Manchester; Dr. De Foote, Rotherham; Mr. Scott, Manchester; Dr. M'Clintock, Church Stretton; Dr. Wood, London; Mr. Kent, Portsmouth; Mr. Abbott, Sheffield; Mr. Fosbrook, Birmingham; Messrs. Bolton and Paul, Norwich; Mr. Woolhouse, Sheffield; Dr. Stevenson, Bradninch; H. H., Newport-Pagnel; M.D.; Anatomy; B. D. M.; H. O. C., Ross; Medicus, Hyde-park; W. C., Woodbridge; Surgeon, Southsea; T. G., Nottingham; X. Y. Z.; Delta, Manchester; Medicus, Wotton-under-Edge; P. F.; Medicus, Stonebroom; Surgeon, Liverpool; Omicron, Bristol; X. Y. Z., London; T. W. F., Somerton; S. G. C., Tunbridge Wells; Sigma, Biggleswade; L. S., Exeter; K., Battersea; X. Z., Hessle; Boaz, Bristol; X., Termintoul; R. W., Anglesea; J. B.; M.D., Leeds; N., Bristol; M., Bournemouth; Registrar, Bath; E. P.; R. W. H., Bloomsbury; Medicus, Aberdeen; Practitioner; J. D., Egham; A. M. C.; A. I., Rochdale; A. B., Dorchester; G. F. P., Burnley; Surgeon, Worle; Lemonwell; W. S. C., Rotherham; W. P., Aberdeen; Medicus.

Civil and Military Gazette, Times of Natal, Anti-Vivisectionist, Bath Herald, New York Times, Stratford Express, Cape Times, Brighton Guardian, Pioneer, Brighton Times, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Sept. 25th, 1879.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 19	30·12	N.E.	62	59	79	67	58	..	Overcast
,, 20	30·13	W.	59	57	87	78	56	..	Overcast
,, 21	30·07	W.	62	58	80	64	53	..	Cloudy
,, 22	29·90	W.	53	51	92	63	47	..	Fine
,, 23	29·66	S.W.	56	55	..	62	52	0·15	Raining
,, 24	29·44	N.W.	51	49	82	61	48	1·35	Cloudy
,, 25	30·11	W.	48	45	91	62	41	0·02	Fine

Medical Diary for the ensuing Week.

Monday, Sept. 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Sept. 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Oct. 1.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Cases: Dr. Lucas, "Cholera in the New-born."—Papers: Mr. Alban Doran, "Deficient Development of the Uterus, Atresia of the Os Externum, Atrophy of the Ovaries"; Dr. Chambers, "Case of Congenital Inguino-ovarian Hernia (double), Operation."—Report of Sub-Committee on the Specimens removed.

Thursday, Oct. 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Oct. 3.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 4.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

TERMS OF SUBSCRIPTION TO THE LANCET.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year.....£1 12 6 | Six Months £0 16 3

TO THE COLONIES AND INDIA.

One Year £1 14 8

Post Office Orders in payment should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable to him at the Post Office, Charing-cross.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under.... £0 4 6 | For half a page £2 12 6
For every additional line. 0 0 6 | For a page 5 0 0

The average number of words in a line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—
M. BERTHIER, 104, Boulevard St. Germain, Paris.